

STUDIES ON GENETIC DIVERSITY OF BRUGIA SPP.  
IN CAT RESERVOIRS BASED ON  
INTERNAL TRANSCRIBED SPACER REGION

A THESIS  
BY  
SUPATRA AREEKIT

PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
MASTER OF SCIENCE IN MOLECULAR BIOLOGY  
AT SRINAKHARINWIROT UNIVERSITY  
MARCH 2007

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AN ABSTRACT  
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Supatra Areekit. (2007). *Studies on genetic diversity of Brugia spp. in cat reservoirs based on internal transcribed spacer region*. Master thesis, M.Sc. (Molecular Biology). Bangkok: Graduated School, Srinakharinwirot University. Advisor Committee: Assoc. Prof. Dr. Kosum Chansiri, Assoc. Prof. Dr. Somchai Santiwatanakul, Asst. Prof. Dr. Roongtawan Supabphol and Asst. Prof. Dr. Nareerat Viseshakul

Lymphatic filariasis is a significant health problem in many developing countries. In Thailand, only two of parasitic worms, *Wuchereria bancrofti* and *Brugia malayi* are reported. It has been noted that *B. malayi* have infected not only human but also animals such as cats, monkeys, and dogs, whereas *B. pahangi* causes morbidity in cats and dogs. Due to their similarity in morphologies and others, the identification of both brugian species in such carriers based on traditional detection tools can be difficult and mostly lead to misdiagnosis. Hence, the data based on genes is the alternative useful information for not only parasite identification but also their genetic diversities. The internal transcribed spacer (ITS) regions were used to determine the genetic diversity of *Brugia* spp. within domestic cat reservoirs from different geographical areas in Thailand. Microfilaria were separated and DNA was extracted prior to PCR amplification. The specific primers of ITS1 and ITS2 regions were used to yield the PCR products of 580 bp and 660 bp in size, respectively. The fragments were cloned, sequenced, and aligned in comparison to the reported data of *B. malayi* and *B. pahangi*. It was found that ITS1 and ITS2 phylogenetic trees demonstrated some genetic variation among *Brugia* spp. Phylogenetic tree construction based on DNA Parsimony (DNA PARS) and revealed that 4 types (Type 1A, Type 1B, Type 1C and Type 1D ) and 8 Types (Type 2A, 2B, 2C, 2D, 2E, 2F, 2G and 2H) of ITS1 and ITS2 were observed, respectively. It can be proposed that ITS regions could be used for studying genetic diversity of *Brugia* spp., especially, in cat reservoirs which will be beneficial for epidemiological study.

การศึกษาความหลากหลายทางพันธุกรรมของ พยาธิเท้าช้าง ชนิดบรูเกีย ในแมวพาหะ  
โดยใช้บริเวณ internal transcribed spacer

บทคัดย่อ  
ของ  
สุพัตรา อารีกิจ

เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อเป็นส่วนหนึ่งของการศึกษา  
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โรคเท้าช้างเป็นปัญหาทางสาธารณสุขในประเทศกำลังพัฒนาหลายประเทศ ในประเทศไทยพบโรคเท้าช้างที่เกิดจากพยาธิเท้าช้าง 2 ชนิด คือ *Brugia malayi* และ *Wuchereria bancrofti* มีรายงานว่าพยาธิเท้าช้างชนิด *Brugia malayi* สามารถพบได้ทั้งในคน และสัตว์รังโรค เช่น สุนัข แมว เป็นต้น ในขณะที่ *B. pahangi* เป็นพยาธิเท้าช้างที่พบได้ในสัตว์รังโรคเป็นแมว และสุนัข โดยยังไม่มีรายงานว่าพบพยาธิชนิดนี้ในคน การจำแนกทั้ง 2 ชนิดนี้ด้วยวิธีที่ใช้ในปัจจุบันยังไม่มีประสิทธิภาพเพียงพอและมักจะทำให้เกิดความผิดพลาดในการบ่งบอกชนิดของการติดเชื้อได้ ในการทดลองนี้ได้ทำการศึกษายีนบริเวณ *internal transcribed spacers* (ITS) มาใช้หาความสัมพันธ์ทางวิวัฒนาการของ *Brugia* spp. สายพันธุ์ต่างๆ จากแมวที่อยู่ตามพื้นที่ต่างๆ ในประเทศไทย โดยนำเลือดที่ได้มาสกัด DNA และเพิ่มปริมาณโดยวิธี PCR ซึ่ง primer ที่ใช้มีความจำเพาะต่อยีน ITS1 และ ITS2 ทำให้ได้ PCR product ที่ได้มีขนาด 580 bp และ 660 bp ตามลำดับ หลังจากนั้นทำการหาลำดับนิวคลีโอไทด์ของยีน แล้วทำ Nucleotide sequence alignment ก็จะถูกนำมาวิเคราะห์และเปรียบเทียบกับ *B. malayi* และ *B. pahangi* ได้จากการวิเคราะห์ phylogenetic tree ของของลำดับนิวคลีโอไทด์ขึ้นภายใน *Brugia* spp. ในขณะที่ phylogenetic tree ของยีน ITS1 และ ITS2 แสดงให้เห็นถึงความหลากหลายทางพันธุกรรมภายใน *Brugia* spp. ผลที่ได้จากการวิเคราะห์ phylogenetic tree ของยีน ITS1 และ ITS2 โดยใช้ DNA Parsimony (DNA PARS) จากข้อมูลแสดงให้เห็นว่า ยีน ITS1 สามารถแยกได้ 4 type คือ Type 1A, Type 1B, Type 1C and Type 1D และ ยีน ITS2 สามารถแยกได้ 8 Types คือ Type 2A, 2B, 2C, 2D, 2E, 2F, 2G and 2H แสดงให้เห็นว่ายีน ITS ใช้ศึกษาความหลากหลายทางพันธุกรรมของพยาธิเท้าช้างชนิดบรูเกียในแมวซึ่งเป็นสัตว์รังโรค เพื่อเป็นประโยชน์ในการศึกษาระบาดวิทยาของพยาธิเท้าช้างชนิดบรูเกียได้

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# CHAPTER 1

## INTRODUCTION

Lymphatic filariasis (LF) or elephantiasis is one of the world's top five most disfiguring and debilitating diseases. The disease is caused by a group of thread-like parasitic worms (microfilaria) namely *Wuchereria bancrofti*, *Brugia malayi*, and *B. timori*. Their habitat is in human lymphatic system. Lymphatic filariasis puts at risk of more than a billion people in more than 80 countries. Among them, Over 120 millions have already been affected by it and over 40 millions of them are seriously incapacitated and disfigured by the disease. One-third of the people infected with the disease live in India, one third are in Africa and most of the remainder are in South Asia, the Pacific and the Americas. In tropical and subtropical areas where lymphatic filariasis is well-established, the prevalence of infection is continuing to increase. In Thailand, two main filarial species, *W. bancrofti* and *B. malayi*, were reported to spare from person to person via mosquito vectors.<sup>(1, 2)</sup> It has been reported that *B. malayi* has infected not only human but also animals such as cats, monkeys and dogs.<sup>(3-5)</sup> Among them, domestic infected cat with is the definite host of *B. pahangi* was reported to be carrier of human *B. malayi*.<sup>(3)</sup> The successful experimental transmission of the parasite between men and domestics has strengthened the belief that zoonotic infection can occur in nature because of their close relationship so that the transmission of the infection from domestic cat to human is possible.<sup>(6)</sup> These animal reservoirs play an important role as the disease carriers which can lead to the problem of epidemiology and eradication in endemic area. Hence, the precise identification and differentiation of *B. malayi* and *B. pahangi* microfilaria, especially, in cat reservoir is crucial for the control and eradication program of the disease. Generally, the diagnosis of *Brugia* sp. is relied on the traditional Giemsa staining for its low cost and convenience. However, the method cannot morphologically distinguish between *B. malayi* and *B. pahangi*. The acid phosphatase staining has been employed for differentiation of these two species but it is not reproducible and is complicated. The molecular methods based on PCR have been introduced to use as tools for differentiation of *B. malayi* and *B. pahangi*. However, the high homology of over 95% in nucleotides sequences in many genes of those two species makes it difficult to reach high validity and fidelity of the differentiation.

To date, the nucleotide sequences of various genes have been investigated and released in Genbank.<sup>(7)</sup> The phylogenetic analysis of these specific and informative genes or regions can explain the relationship and diversity of the interested organisms. Among those genes, the 18S rDNA has been widely used for classification and identification of inter-species. Nevertheless, our previous examination of 18S DNA phylogenetic trees using Neighbor-Joining (NJ) and DNA maximum likelihood (DNA ML) analysis could not differentiate *B. malayi* from *B. pahangi*. The nucleotide comparison of 18S rDNA between these two species revealed only some of single nucleotide polymorphism (SNP) which are not sufficient for their use as the specific markers of each species.<sup>(8)</sup> Herein, we have employed the use of internal transcribed spacer region (ITS) which has been demonstrated to be informative for its use in analysis of the intra-species due to its variability of some specific nucleotide sequence. In 2006, Phasuk and coworkers revealed that its nucleotide sequences are sufficient for discrimination of *B. malayi* and *B. pahangi* not only in single species infected cat reservoirs but also in the concomitance ones.<sup>(8)</sup> However, in the latter case, the member of selected ITS clone were not adequate to proof of the mixed-infection of the *Brugia* sp.

Thus, this study will explore the genetic diversity of the two species, especially in cat reservoirs as well as the co-infection by using the phylogenetic analysis of the ITS region. The phylogenetic trees were constructed to elucidate the discrimination of the closely related *B. malayi* and *B. pahangi*. In addition, this study will also focused on identification of mix-population within a single *Brugia* sp. infected cat reservoirs based on ITS nucleotide sequenced. The data were beneficial for epidemiological study, control, and eradication of lymphatic filarial in endemic area.

## CHAPTER 2

### LITERATURE REVIEW

#### 1. Human lymphatic filariasis

Lymphatic Filariasis, more commonly as Elephantiasis, is a significant human health problem in many developing tropical and subtropical countries around the world infecting approximately 120 million people. Lymphatic Filariasis mainly caused by three species of filaria nematodes *Wuchereria bancrofti*, *Brugia malayi*, and *B. timori* localize in human lymphatics and are associated with development of the pathologic lesions of lymphatic filariasis. All are transmitted by mosquitoes which most cases of Lymphatic Filariasis occur in Southeast Asia, the Indian subcontinent, and Africa. Of the three parasite species ninety percent are caused by *W. bancrofti* which is widely distributed in endemic regions such as Africa, India, the Pacific islands, South America, and Southeast Asia including the west of Thailand. And ten percent are caused by *B. malayi* which is widely distributed in Asia countries such as China, Korea, India, Indonesia, Malaysia, Philippines, and Sri Lanka. *B. timori* infection occurs in Indonesia (islands of Alor, Flores, Timor)<sup>(9, 10)</sup>(Figure 1). The adult filarial parasites live in the lymphatic vessels near the lymph nodes where they distort the vessels and cause local inflammation. As the parasites accumulate in the blood vessels, they can restrict circulation and cause infection excessively the surrounding tissue to become enlarged. Bancroftian filariasis caused by *W. bancrofti* affects the legs and genitals; where as, the Malayan filariasis caused by *B. malayi* affects the legs below the knees. Repeated episodes of inflammation lead to blockage of the lymphatic system, especially in the genitals and legs. The worms in the lymphatic system cause tissue changes which restrict normal flow of lymph and result in swelling, fibrosis and eventually secondary infection in the affected tissue the lower extremities and groin are the parts most like to be affected. This causes the most common, visible signs of infection which are excessively the affected area to become grossly enlarged with thickened and coarse skin and is known as elephantiasis.<sup>(11, 12)</sup>

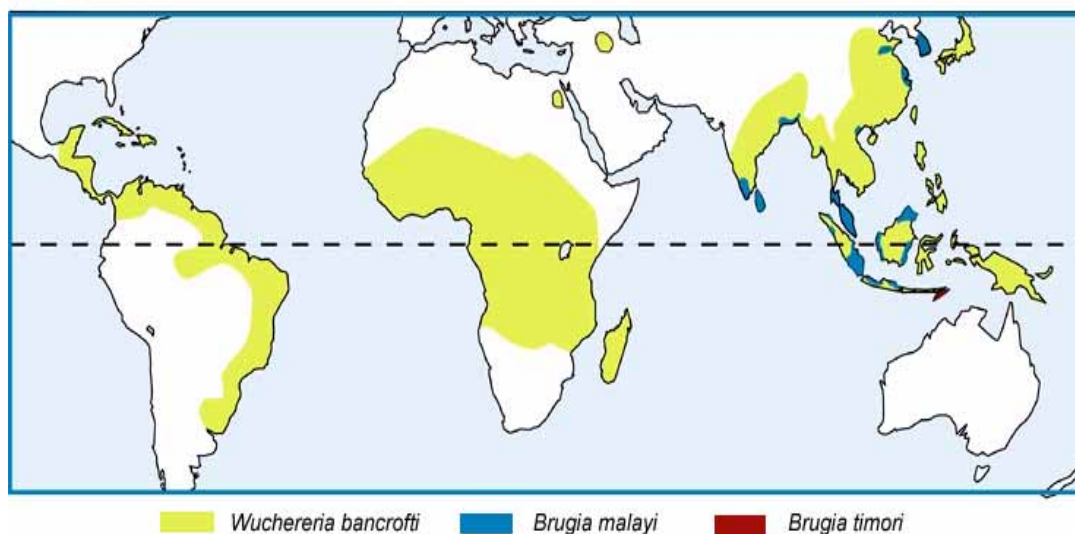


Figure 1 Geographical distribution of lymphatic filariasis.<sup>(13)</sup>

The parasites that infect human have been classified on the basis of their microfilarial periodicity into “periodic” and “subperiodic” form. These variants have minor morphological differences but can be distinguished through their vectors and mammalian host range and distribution. Thus, the nocturnally periodic form of *W. bancrofti*, the predominant infection, is an urban parasite and is transmitted very efficiently by *Culex quinquefasciatus*, the mosquito associated with poor urban sanitation whereas the rural forms are transmitted by *Anopheles spp* and *Aedes spp*.

There are some differences in mosquito vectors of *B. malayi* infection. The nocturnally periodic microfilaria type is transmitted by the mosquitoes which include *Mansonia uniformis* and *M. indiana Indiana* group or some *Anopheles* species, while the nocturnally subperiodic microfilaria Malayan type is transmitted by *M. dives* and *M. bonneae*. The prevalent of the latter is facilitated by many animal reservoirs including domestic cats, forest-leaf monkeys, and some wild animals which contribute to the difficulty and ineffectiveness in the control programme of filariasis in the country.

## 1.1 Taxonomy

Human filariasis is classified as shown below.<sup>(10)</sup>

|             |                      |
|-------------|----------------------|
| Phylum      | Nematoda             |
| Class       | Secernentea          |
| Subclass    | Spiruria             |
| Order       | Spirurida            |
| Suborder    | Spirurina            |
| Superfamily | Filarioidea          |
| Family      | Filariidae           |
| Genus       | <i>Brugia</i> spp.   |
| Species     | <i>Brugia malayi</i> |

## 1.2 Morphology

The adult worms of *B. malayi* are smaller than those of *W. bancrofti*. There are also some differences in the pattern of papillae and spicules. The morphology and size of the copulatory spicules is one of the most important diagnostic characters among the filariae. All Malayan genera have dissimilar and usually unequal spicules. Female worms are 43 to 55 mm in length by 130 to 170  $\mu\text{m}$  in width, and males are 13 to 23 mm in length by 70 to 80  $\mu\text{m}$  in width. Adults produce microfilariae, measuring 177 to 230  $\mu\text{m}$  in length and 5 to 7  $\mu\text{m}$  in width. The microfilariae of *B. malayi* have 2 terminal nuclei that are distinctly separated from the other nuclei in the tail.<sup>(14, 15)</sup> (Figure 2) The last terminal nucleus is quite small and located at the tip of the tail. The sheath stains deep purple with haematoxylin stain.



Figure 2 Microfilaria of *B. malayi*. These sheathed microfilariae are measured approximately 170 – 230  $\mu\text{m}$  in length and have 2 terminal nuclei that are distinctly separated from the other nuclei in the tail. The microfilariae of *Brugia* species are tightly coiled, and the nuclear column is more tightly packed, preventing the visualization of individual cells. (Haematoxylin stain, x400)<sup>(15)</sup>

### 1.3 Life cycle

The life cycle of the nematodes parasitic filarial worms, *W. bancrofti*, *B. malayi* and *B. timori* that cause lymphatic filariasis are similar. They are dwelling in the lymphatic system, the network of nodes and vessels that maintain the delicate fluid balance in the tissues, blood and an essential component to the body's immune defense system. They live for years and produced millions of immature microfilaria that circulate in the blood. When they are picked up by mosquitoes, the microfilariae and develop to infective larva stage (L3) and can be transmitted to the other.

Adult male and female of *B. malayi* are located in the lumen of lymphatic. They may live for 7-10 years. Cases of 40 year longevity have been reported.<sup>(16)</sup> Adult female filariae are viviparous, producing thousands of microfilariae which circular in the blood, after fertilization by adult male parasite. Microfilariae of *B. malayi* retain the egg membrane as a sheath and migrate from the lymphatic into the bloodstream. The microfilaria ingested by the mosquito where they loss the sheath and within an hour they escape from the gut contents by penetrating the surrounding epithelium. A hook-like device may serve to breach

the mid gut wall <sup>(17)</sup> and eventually reach the thoracic musculature or fatty tissues of the mosquitoes. In the thoracic muscles, the parasite is shortened by metamorphosis into first stage larvae (L1). A sausage-shape L1 larva of *B. malayi* at 2.5 days has a mean length of  $143.7 \pm 3.8 \mu\text{m}$  and a maximum width of  $16.5 \pm 0.7 \mu\text{m}$ . At about 5 days the L1 moults become the second stage (L2) larva with mean length of  $441 \pm 27 \mu\text{m}$  and maximum width of  $29.4 \pm 1.8 \mu\text{m}$ . It is slightly more active than the L1. By the 9<sup>th</sup>-10<sup>th</sup> day, the L2 moults become the third or infective stage (L3) with a mean length of  $1503 \pm 40.6 \mu\text{m}$  and maximum width  $30.5 \pm 0.7 \text{ mm}$ . The L3 which is a very active stage at maturity migrates mainly to the proboscis but can also be seen in other parts of the insect body. When the infective mosquito bites a susceptibility host, the L3 larvae are deposited on the skin surface during the process of probing by mosquito prior to puncture with the proboscis. After withdrawal of the proboscis, the L3 actively migrates into the wound and travels to afferent lymphatic and subcapsular sinus. Approximately 9-10 days after entry into the definitive host, the L3 moults to the fourth stage (L4). In two-week old experimental infections in the leaf monkey *Presbytis melalophos*, *B. malayi* female and male L4 larvae have a mean length of  $4710 \pm 214.3 \mu\text{m}$  and  $4236 \pm 120.8 \mu\text{m}$  with a maximum width of  $38.6 \pm 2.7 \mu\text{m}$  and  $37.9 \pm 1.9 \mu\text{m}$ , respectively. The final moult (L5) occurs approximately 35-40 days after initial infection by the 5<sup>th</sup> week juvenile adults in *P. melalophos* have mean lengths of  $13.7 \pm 0.3 \mu\text{m}$  and  $12.6 \pm 0.5 \text{ mm}$  in female and male <sup>(18)</sup> with the maximum width of  $76.4 \pm 2.8 \mu\text{m}$  and  $64.7 \pm 2.2 \mu\text{m}$ , respectively. Sexual maturity occurs two to three months post infection in *B. malayi* with mean pre-patent periods of 67 days in *P. melalophos* and 80 days in cats and jirds <sup>(19)</sup> and 3.5 months in human. <sup>(20)</sup>

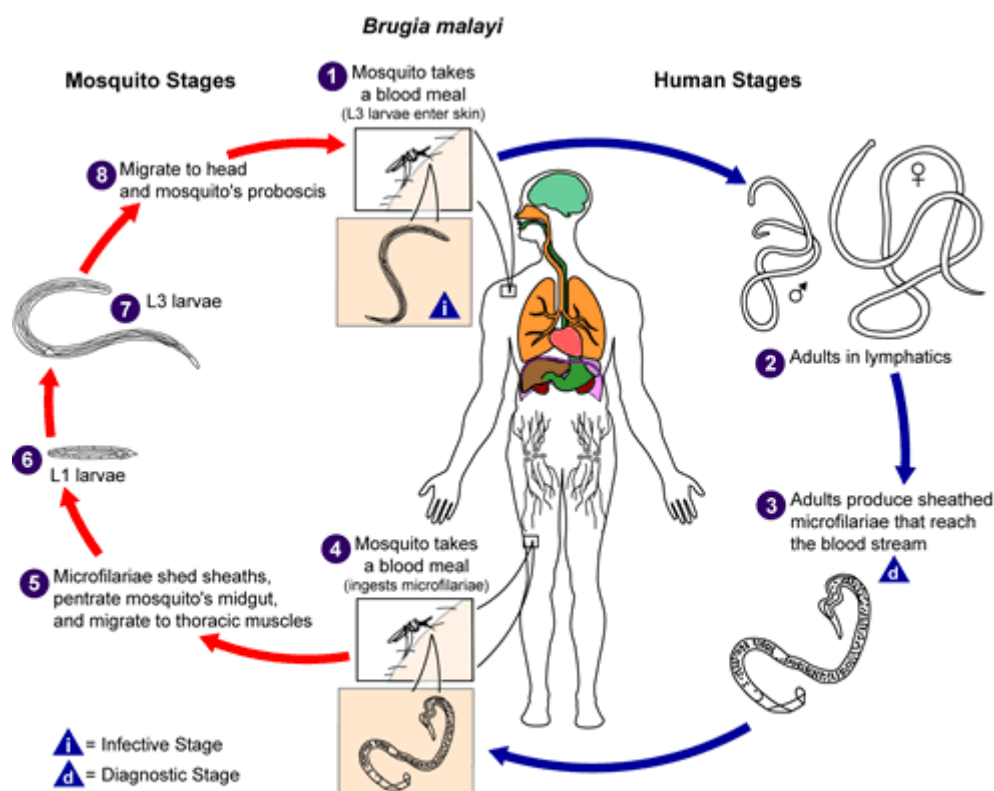


Figure 3 Life cycle of *B. malayi*.<sup>(21)</sup>

#### 1.4 Pathogenesis and Pathology

The pathology associated with lymphatic filariasis results from a complex interplay of the pathogenic potential of the parasite, the immune response of the host. The adult worms cause lymphatic inflammation and obstruction in the scrotum, spermatic cords, epididymis, testis, arms, legs, abdomen, and retroperitoneal area. Lymphangitis and lymphadenitis are thought to be allergic reactions to worm secretions or antigens liberated from dead filariae periodically so that the attacks of chill and fever are recurrent. Obstruction almost certainly results from simple mechanical blocked by the worm. Lymph varicose is among the early signs of lymphatic obstruction, and if they rupture, lymph (chyle) is released into the peritoneum, kidneys, bladder, scrotum, or bowel. Another pathological condition associated with lymphatic filariasis is chyluria. Chyluria and chylous ascites are manifestations of this phenomenon. Impediment of the smaller subcutaneous lymphatic vessels produces lymphedema of the scrotum, vulva, legs, arms, and breast. As lymphedema

to lead into subcutaneous fibrosis and hyperkeratosis, the skin takes on the character of elephant hide and become thick, hard, and dry from loss of sweat glands.

On the contrary to the adult worms, the microfilaria provides to the little of the pathology in this disease. In reality, among lymphatic obstruction and positive blood smears or microfilaria there is a negative correlation. There are perhaps 20,000 microfilaria per milliliter of blood from people with no symptoms, and in patients with elephantiasis has negative blood smears. It is probably due to the adults have died before lymphatic injury, and become severe enough to produce clinical disturbances. A positive correlation exists between clinical severity and the development of rapid infection with many worms. The American troops in the South Pacific developed lymphangitis, lymphadenitis, and swelling of the genitalia of arms in relation to nine months.<sup>(22)</sup> The distinction probably is explained by the speed rate and intensity of the infection. European and America living in the tropics under peacetime condition can protect themselves well enough from night-biting mosquitoes to avoid heavy infections. The troops in the South Pacific, in contrast, were deeply exposed to the day-biting mosquitoes (*Aedes scutellaris polynesiensis*) near native villages, and received bites from more infected mosquitoes in a few weeks than foreigners residing in other endemic regions would get in years. Individual variation in sensitization to worm antigens possibly explains why, among persons with equal exposure to infection, some develop lymphangitis and lymphadema, and some do not. A definite association between certain immune phenomena and clinical manifestation of filariasis. For example, the titer of IgG antibodies against surface antigens of microfilaria, the prevalence of immune complexes, and the degree of in vitro lymphocyte reactivity are high in patients with hydroceles or elephantiasis than in those with acute filarial adenitis and lymphangitis. Likewise, there is an evidence that tropical pulmonary eosinophilia is a form of occult filariasis that results from excessive hypersensitivity to the microfilariae.<sup>(23, 24)</sup> Biopsies showing acute lymphangitis with no adult worms in sight are consistent with idea that inflammatory lesions are the result of allergy to worm antigens carried along the lymph channels rather than a nonspecific reaction to the intact worm.

In lymph nodes and lymph vessels, the tissue reaction is an infiltration of histiocytes, lymphocytes, and eosinophils, along with hyperplasia of the lymphatic endothelium. The lymphatic walls become thickened and edematous in order that its lumen narrows and dilation occurs beyond it. Within the dilatation of the lymph vessels and nodes lay the tightly coiled adult worms. Afterward, small granulomas appear in the lymph nodes, when the active inflammation is replaced by fibrosis and sclerotic lymph channels are come

permanently obstructed. The granulomatous tissues are eventually absorbed, and the scar sometimes calcifies around dead worms. The obstructed lymph channels develop varies; in some areas, they become obliterated fibrous strands.

The position of elephantiasis relies on which lymph nodes are obstructed. Obstruction of the para-aortic nodes blocks drainage of lymph from the tunica virginals, epididymis, and spermatic cord in order that hydrocele develops<sup>(25)</sup> exclusive of edema of the scrotal skin, which drains into the superficial inguinal glands. In patents with elephantiasis of the leg, the obstruction is in inguinal or iliac group of nodes. (Figure 4)



Figure 4 Early (left) and late (right) stages of Brugian elephantiasis.

### 1.5 Parasitological diagnosis

Parasitological techniques involve the demonstration and identification of circulating microfilariae or their presence in various body fluids e.g. hydrocele fluid and chylous urine. The clinical features of filariasis may perhaps be so definite. For example, lymphoedema and elephantiasis are found in patients living in endemic areas of filariasis that diagnosis is usually not a problem. However, very few infected people show evidence of gross chronic disease manifestation. The mean elephantiasis rate in most endemic areas of Malaysia is only about 1%. Most microfilarial carriers are asymptomatic although in certain endemic areas as many people may have clinical signs suggesting filariasis. Diagnosis is normally based on clinical, parasitological, immunological and occasionally histopathological features.

The diagnosis of lymphatic filariasis traditionally has depended on the laboratory examination of blood extracted between 10 p.m. and 2 a.m. when the worms are most active. Parasitological techniques involve the demonstration and identification of the presence of circulating microfilariae in various body fluids e.g. hydrocele fluid and chylous urine. Normally, 60 µl thick blood smear films are prepared from peripheral blood taken at night, and then are allowed to dry preferably overnight and stained with diluted Giemsa or Field's stain.

The detection of *B. malayi* infection is essentially important for monitoring the effectiveness of the traditional programs relying on antimosquito measures and on single oral administration of diethylcarbamazine (DEC) therapy. Parasitological diagnosis by detection of microfilariae in blood or in hydrocele fluid (in chyluria) can be done. The conventional thick blood film is still the best method in the field work, but it is limited which depends on the presence of microfilariae in blood at the night time. Despite its simplicity and low cost, the sensitivity is dependent on the volume of blood sample (typically 20-60 µl), the time of blood collection, skill and dedication of the microscopist.

The presence of microfilariae can be detected by the DEC provocation test in day time after provoking the microfilaria in the lung capillaries to invade the peripheral blood. This is suitable for areas where night blood collection of nocturnal subperiodic *B. malayi* is impossible. However, it is insensitive, labor-intensive, and has some side effect "Mazzotti reaction" in patients with coinfection of *W. bancrofti* and *O. volvulus*.

One of the diagnostic tools for identification of filarial parasites is the membrane filtration. It is more sensitive than thick blood smear but also labor-intensive and time-

consuming. Capillary tube technique is rather rapid assessment to work efficiently in the field when immediate result is required, but is labor-intensive, not sensitive and cumbersome in the field condition. Antibody test seems to be an alternative method for detection of the infected people. New antibody tests based on clone antigens may overcome the cross-reactivity difficulty. These may be able to replace night blood sampling. In addition, may also be useful tools in epidemiological surveys<sup>(26)</sup> but does not distinguish between active and past-infections.<sup>(27, 28)</sup> Antibody titers are not correlated with infection intensity (or worm load) in the patient. Alternatively, filarial DNA can be detected by PCR which is very sensitive and species specific but is imperfectly performed with contamination in the field condition. Moreover, the method is expensive and impractical for routine use in endemic area.

#### 1.6 Malayan filariasis in Thailand

Lymphatic filariasis, caused by *B. malayi* parasites, is an important mosquito-borne disease in Thailand. At present, the endemic areas of lymphatic filariasis in Thailand are limited to some provinces in the Southern region.<sup>(29)</sup> However, due to the recent report of Titeeraprapab and Songtrus<sup>(30)</sup>, the high prevalence as up to 4.4 % was reported in the group of Myanmar migrant workers in Tak province, and Northern Region of Thailand.

Since 1961, the data from the Public Health Department of Thailand roughly indicated the areas affected with filariasis. The provinces of Thailand that had been reported as endemic areas of brugian filariasis, are Chumphon, Surat Thani, Kra-bi, Nakhon-Sriphamarat, Trang, Phthalung, Pungna, Stoun, Songkla, Pattani, Yala and Narathiwat. In 1995, Department of Filariasis, Ministry of Public Health reported that the prevalence of lymphatic filariasis in Thai people has continued to decline over the past 2 decades. The disease has limited to 7 out of the 76 provinces of Thailand with the prevalence rate of 3.27 per 100,000 populations. From 1961 until 2000, the microfilariae positive rate (MPR) was decreased from 3.16% to 0.21% and the endemic areas of lymphatic filariasis of Thailand was reduced from in the past to Surat Thani, Nakhon-Sriphamarat, Kra-bi and Narathiwat. The data from Ministry of Public Health also showed that the migration of Myanmar to work in Thailand has threatened the Thai public health in overall. These Myanmar also carry with them many infectious diseases including lymphatic filariasis.

### Filarial species found in Thailand <sup>(31)</sup>

The filarial species found in Thailand can be divided into 5 strains according to their periodicity, i.e. which are listed below.

- *W. bancrofti* nocturnally subperiodic type long strain (rural strain) which is endemic in Tak and Kanchanaburi provinces in the west.
- *W. bancrofti* nocturnally subperiodic type short strain (rural strain) which is endemic in Mae Hong Son province, northern part.
- *B. malayi* nocturnally periodic type: had been found in southern Thailand.
- *B. malayi* nocturnally subperiodic type: found in southern Thailand.
- *B. malayi* nocturnally subperiodic type: found only in Prasang district, Surat-Thani province, southern Thailand.

### Lymphatic Filariasis in Thailand



Figure 5 The distribution of lymphatic filariasis in Thailand.

### 1.7 Brugia filariasis vectors

The typical vectors for *B. malayi* are mosquito specie from the genera *Mansonia* and *Aedes*. *Mansonia* mosquito plays the important role as the main vector of *Brugia filaria* in Thailand.<sup>(32, 33)</sup> Six species of *Mansonia* mosquito are reported (*M. annulata*, *M. annulifera*, *M. boneae*, *M. dives*, *M. indiana* and *M. uniformis*) and are incriminated as vectors for transmission of infection. All of species are abundant in the southern part of Thailand, especially, Chumpon, Surat-thani, Pattani, and Narathiwat provinces. Among them, only *M. boneae* and *M. dives* are similar to exophilic species with highest peak during post-dusk for feeding during 19.00-21.00 p.m. or throughout the night and repack in pre-dawn. For *M. uniformis* and *M. indiana*, the time of feeding meal is similar to previous dual mosquitoes but it increases for some time of interval *M. uniformis* have their feeding during 23.00 p.m. –02.00 a.m. for indoor and during 01.00 a.m.-05.00 a.m. for outdoor. In the south of Thailand, many areas are the high ground water and landscapes. There are numerous ponds, canals, swamps forest and open swamps that are suitable for the *Mansonia* habitat.



Figure 6 *Mansonia* species: *Brugia filariasis* vectors.<sup>(34)</sup>

### 1.8 Animal reservoirs and zoonotic lymphatic filariasis

The relative susceptibility of human and other animals to infection and their host preferences of mosquitoes have been utilized to classify in general way whether or not the various types of filariasis exist as zoonosis. Several wild and domestic animals have been nocturnally infected with subperiodic *B. malayi*.<sup>(3-5)</sup> The successful experimental transmission of the parasite between man and animals.<sup>(6, 35)</sup> have strengthened the belief that zoonotic infection can occur in nature because of their closely relationship. The transmission of the infection from domestic cat to human is possible. The study of *B. pahangi*, which is a common filarial parasite of wild and domestic animals in Southeast Asia, have been used as an experimental model for studying filariasis.<sup>(4, 35-39)</sup>

Differentiation of microfilaria among *B. malayi* and *B. pahangi* the diverse species and strains of filarial parasites has been studied. In Malaysia, *B. pahangi* coexists in many of the same hosts as the zoonotically transmitted subperiodic *B. Malayi*<sup>(4-6, 36, 37)</sup> and develops in some similar mosquito vectors.<sup>(19)</sup> However, *B. pahangi* dose not infect man naturally, but have experimental infection of *B. pahangi* in man has been reported by Edeson and coworkers.<sup>(40)</sup> Attempted transmission manifestation of *B. pahangi* to human volunteers have resulted clinical symptoms similar to that of tropical eosinophilia syndrome<sup>(41)</sup> Mak and colleagues assumed that natural infection in man could exist but previously might confuse with *B. malayi* when using routinely diagnosis because of the similarity of the microfilariae in standard Giemsa and Haematoxylin preparations.<sup>(5)</sup> In case of the possible zoonotic implications of filariae, a reliable method for the specific identification would be advantage in any epidemiological and zoonotic studies.

### 1.9 Differentiation of *B. malayi* and *B. pahangi*

The basic structure of microfilaria for various species of human filariae has been investigated by a number of workers. However, Fulleborn proposed a standard method for description and measurement of various specialized structures of microfilaria in 1913. Certain "fixed points" were designated, and their relative positions in percentages to the total length were found to be stable figures for each species, regardless of the variations in the size. The following are the main characteristics useful for the identification of species. The microfilaria of *Brugia* can be differentiated by measurement of the cephalic apace, counting tail nuclei, and percent of exsheathment.<sup>(42)</sup> Subperiodic *B. malayi* had the shortest body length: 175-225  $\mu\text{m}$  (mean 199.2  $\mu\text{m}$ ). Periodic *B. malayi* and *B. pahangi* were longer than subperiodic *B. malayi* and they were about the same length, 223-297 $\mu\text{m}$

(mean 252.4  $\mu\text{m}$ ) and 226-303  $\mu\text{m}$  (mean 255.7 $\mu\text{m}$ ), respectively. *B. pahangi* had the smallest body width. The number of nuclei space ratio of subperiodic *B. malayi* and periodic *B. malayi* are 1:1.47 and 1:1.83, respectively. The number of nuclei arranged in a single row in the tail of microfilaria showed that 4% of all subperiodic *B. malayi* had 5 nuclei while in the periodic *B. malayi* and *B. pahangi*, 78% and 86% of microfilaria, respectively, had 5 to 6 nuclei. Differences in the morphological characters of the microfilariae as the length width ratio of cephalic space, the overall length and the general appearance (to the more experienced eye *B. pahangi* has a slightly more graceful curved and less kinked appearance than that of subperiodic *B. malayi*) are usually used to make a distinction the species.

The apparent difference in the length of the "Innenkorper" of *B. pahangi* and subperiodic *B. malayi* was also been considered. The "Innenkorper" of *B. pahangi* being 21.7 percent (1/4.6) of the whole length of the microfilaria as against only 13.8 percent (1/7.3) of subperiodic *B. malayi*. Comparison of the absolute length of the "Innenkorper", 53.1  $\mu\text{m}$  (range 44-63  $\mu\text{m}$ ) in *B. pahangi* and 30.7 $\mu\text{m}$  (range 24-34  $\mu\text{m}$ ) in subperiodic *B. malayi* also indicates a marked difference, there is no overlap between the longest measurement in the latter and the shortest in the former.<sup>(43)</sup>

The most of human cases of filariasis diagnosis is based on the detection of microfilariae in the peripheral blood. It is possible that a significant of infections in Malaysia diagnosed as due to *B. malayi* may, in fact, have been due to *B. pahangi*. Experimental infection of *B. pahangi* in man has been reported.<sup>(40)</sup> Also, clinical manifestations similar to tropical eosinophilia syndrome were reported in a human volunteer experimentally exposed to *B. Pahangi*.<sup>(41, 44)</sup>

Accordingly, a relatively simple and reliable method of differentiating these two parasite species would be advantageous in any field or laboratory study.

In 1975, Redington and co-workers differentiated microfilaria of *B. malayi* and *B. pahangi* on the basis of the specific distribution of their acid phosphates activity. In *B. malayi*, the excretory and the anal pores were the two most prominent sites of red azo dye precipitation. Two other sites of somewhat lesser enzymatic activity were located one at the extreme anterior end and the other in an area equidistant from the anal pore and the tail tip. These locations were corresponded to the position of the "roten Mund Gebilde" or amphid and "Schwanzgebilde" or phasmid organelles, respectively.<sup>(45, 46)</sup> The remainder of the body exhibited practically no enzymatic activity. The microfilariae of *B. pahangi*, in contrast, showed heavy diffuse acid phosphatase activity along their entire length. The

excretory and anal pores, however, were still recognizable because of their more extreme staining.

Identification of *B. malayi* and *B. pahangi* has been explored on larvae morphology by using the morphological characters *B. pahangi* and subperiodic *B. malayi* larvae develop in mosquitoes. The larval stages in the mosquitoes have been considered morphologically identical. In 1971-1972, Beckett and Macdonald examined both species larvae in the mosquitoes and revealed regular differences in the structure of the rectum.<sup>(47-</sup>

<sup>49)</sup> After the infecting meal at one day, no rectal protrusion could be seen in *B. pahangi* larvae while larvae of *B. malayi* are visible on rare occasions as a tiny pin-point. In two days, as the larvae of both species shortened, the rectal protrusion became obvious, but it was small. When the developing larvae were dissected from the mosquitoes between five and nine days later during the second half of the larval development phase, it was found that the morphology of the rectal plug provided a mean of distinguishing the two species. *B. malayi* formed a larger protuberance, and was situated closer to the posterior end of the larvae than was in the case of *B. pahangi*. The shape of protrusion in *B. malayi* was roughly semicircular, although its maximum depth came rather below the midpoint where in *B. pahangi* was more like a small flat-tapped button. The differences between the two species were visible in two-day larvae and they were very obvious from three to five days which thereafter became less obvious.

At the first or second developmental stage larva whose detection in the thoracic muscles of mosquito is not conclusive proof of capability to transmit filaria. Hence, the detection and identification of third stage larvae is a critical step in assessing the impact of control measures on transmission and incriminating vectors. In 1959, the epidemiological importance of the correct identification of filarial larvae in their vector had been thoroughly discussed by Nelson who stated that data collected in filariasis surveys and their interpretation would be useless and insignificant unless there is complete confidence in identification filarial larvae in their vectors.<sup>(50)</sup> In 1966, the World Health Organization Expert Committee on Onchocerciasis stated that “unless there is confidence in the identification of filarial larvae in simuliids, it is impossible to determine the relative importance of particular species as vectors, and there is little point in calculating indices to explain different intensities of transmission.”<sup>(51)</sup>

In 1982, Yen and colleagues studied the three standard larval characters of total length, anal ratio and caudal papillae which are generally diagnostic of genera.<sup>(52)</sup> However, they are not always sufficient to differentiate species within the same genus. This

has been observed in *B. malayi* and *B. pahangi*. That the average measurements are overlapped as indicated by their ranges. This confirms the observations of Nelson (1959)<sup>(50)</sup> that the infective larvae of *B. pahangi* and *B. malayi* cannot be distinguished only on a morphological basis.<sup>(53)</sup>

Biochemical characterization identification of L<sub>3</sub> of *B. malayi* and *B. pahangi* by using enzyme electrophoresis has been shown to be an extremely useful laboratory tool for the accurate identification and characterization of species and subspecies of human and animal parasites such as *Entamoeba*<sup>(54)</sup>, *Plasmodium*<sup>(55)</sup>, *leishmania*<sup>(56)</sup>, *Taenia*<sup>(57)</sup> and *Trypanosoma*.<sup>(58)</sup> In 1981, Lim and co-workers suggested that enzyme electrophoresis may be a valuable procedure for distinguishing the filarial parasites. Enzymes are discrete proteins and its variation is considered an expression of genetic variation.<sup>(59)</sup> In 1984, Flockhart and Denham used enzyme electrophoresis of 2 enzymes, phosphoglucose mutase (Pgm) and phosphoglucose isomerase (Pgi) to characterize species and life cycle stages of *B. pahangi* and subperiodic *B. malayi*. They found that only one major isozyme of Pgi had lower pI than that of *B. malayi*. Similarly, only one major isozyme of Pgm was existed in both *B. pahangi* and *B. malayi* but they were different. By using this isozyme electrophoresis of the third stage larva, *B. pahangi* and *B. malayi* can be separated.<sup>(60)</sup>

Identification of *B. malayi* and *B. pahangi* by the use of their adult worms are normally performed by detailed examination of the male spicules. The adults of *B. malayi* are delicate, whitish, thread-like round worms and coiled up in pairs in dilated lymphatics. Mature females vary in length from 43.5 to 55 mm and in breadth from 130 to 170  $\mu\text{m}$ . The mature males vary in length from 13.5 to 23.3 mm, and in breadth from 70-80  $\mu\text{m}$ . The longer left spicules of *B. malayi* consist of 3 parts. Firstly, a tubular proximal part is open and slightly expanded at its proximal end. It is less than half the total length and has a pitted appearance ("granular stippling") which distinguishes it clearly from the median and distal parts. The second or median part is short and non-tubular. It is difficult to describe its appearance but it might be likened to one half of a leaf bisected longitudinally whose median stem is a prolongation of the tubular proximal part of the spicule. This is a solid rod of almost uniform thickness which is extruded through the anogenital aperture for most of its length outside the body of the worm. After a very slight narrowing near the extremity, it terminates in a characteristic speculate tip. The much shorter right spicule is curved ventrally and consists of a tubular proximal half and a narrower cylindrical distal portion through which the left spicule runs.

The adults of *B. pahangi* are whitish and thread-like round worms. The body cuticle is unstained throughout (except in the ventral surface of the male tail) and the bulbous head and papillae are of *Wuchereria* type. The esophagus is more clearly visible into two parts in both sexes than in *B. malayi*. The anterior muscular part is thinner than the glandular part and the junction of the two can easily be seen. The female measures 40 mm in length and 100  $\mu\text{m}$  in breadth. The males vary in length from 12.6 mm to 17.3 mm and in breadth from 70 to 80  $\mu\text{m}$ . The spicule of *B. pahangi*, a very marked structural difference, is seen in the left spicule whose distal part is much shorter and somewhat thinner than that of the *B. malayi* with the lack of spatulate termination characteristic.<sup>(61)</sup>

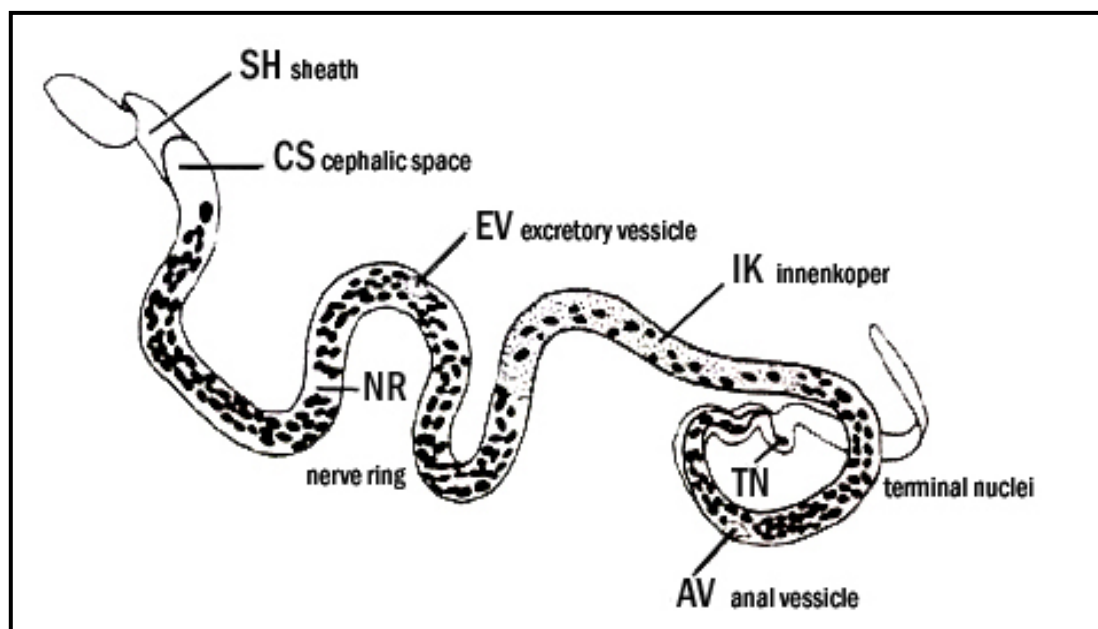


Figure 7 Microfilaria of *B. malayi*



Figure 8 Geimsa stain of blood smear, A Microfilaria of *B. malayi* in human (left) and of *B. pahangi* in cat (right).<sup>(62)</sup>



Figure 9 Acid phosphatase stain of blood smear, A Microfilaria of *B. malayi* in human (left) and of *B. pahangi* in cat (right).<sup>(62)</sup>

Table 1 Comparison of the size and the dimension (in  $\mu\text{m}$ ) of surface structures of microfilaria of *B. malayi* and *B. pahangi*.<sup>(63)</sup>

|                                                                  | <i>B. malayi</i>                 | <i>B. pahangi</i> |
|------------------------------------------------------------------|----------------------------------|-------------------|
| 1) Body length (mm)                                              | 210 $\pm$ 15                     | 218 $\pm$ 32      |
| 2) Body width ( $\mu\text{m}$ )                                  | 3.88 $\pm$ 0.68                  | 3.59 $\pm$ 0.46   |
| 3) Mouth diameter ( $\mu\text{m}$ )                              | 0.26                             | 0.26              |
| 4) Hook length ( $\mu\text{m}$ )                                 | 0.76                             | 0.46              |
| 5) Annulations width<br>(at the middle region) ( $\mu\text{m}$ ) | 0.34 $\pm$ 0.04                  | 0.36 $\pm$ 0.02   |
| 6) Tail length ( $\mu\text{m}$ )                                 | 5.41 $\pm$ 1.34                  | 3.06 $\pm$ 0.51   |
| 7) Morphology of sheath ( $\mu\text{m}$ )                        | translucent and<br>rather smooth | granular sheath   |

The microfilarial stage of *B. malayi* and *B. pahangi* are engulfed with sheath. The sheath could be used to differentiate species since the sheath of *B. pahangi* was granular<sup>(64)</sup>; whereas, that of *B. malayi* is translucent and rather smooth. The unsheathed microfilaria of both species shared common pattern of the cuticular surface structure. The anterior end carries the cephalic cap with the hook, mouth, amphidial openings, and spines. The cuticle shows annulations.

At the third-stage larvae, the structure at the anterior extremity of *B. pahangi* infective larva is very similar to that of *B. malayi*.<sup>(65)</sup> The anterior ends of *B. malayi* and *B. pahangi* show two circles of four cephalic papillae each; each circle consists of two subdorsal and two subventral papillae<sup>(66)</sup> around the mouth and two amphidial opening lined at the inner circle. The anal opening is situated at posterior region. The cuticle is transverse annulations. The posterior end has two ventrolateral papillae and one dorsoterminal papillae. The ventrolateral papillae in *Brugia* have an indentation around its base which is wider in *B. malayi* than in *B. pahangi*. Furthermore, the ventrolateral papillae of *Brugia* is round-shape and those of *B. malayi* are more protruded and bigger than that of *B. pahangi*.

In the adults, the mouth, amphidial openings and cephalic papillae of *B. malayi* and *B. pahangi* are still present.<sup>(66-70)</sup> The female worm are found vulva and the anus at the

anterior and posterior parts, respectively. The small round tubercles are found in both sexes but they are prominent at the posterior region of the female worm. Ribbons of short longitudinal ridges of each annulation on ventral aspect of the posterior region are observed only in male worm.<sup>(67-70)</sup> Identification of different species of adult male worm is based on the appearance of long copulatory spicules<sup>(19, 61)</sup>, in which *B. malayi* spicule has spatulated tip; whereas, that of *B. pahangi* has tapered cylindrical tip.<sup>(19)</sup> In female adult worms, the tubercles at the posterior region can be used for differentiation of *Brugia* species.<sup>(66-70)</sup> *B. malayi* is larger than of *B. pahangi* by the size of the tubercles in the vicinity of the anus.

The scanning electron microscopic study of the structural differentiation among the three stages: microfilaria, third-stage larva and adults of *B. malayi* and *B. pahangi* give more valuable information. Therefore, this method might be utilized for precisely characterization of species. The life cycles of human and animal filariae are known to be potentially zoonotic, especially, in many of the same hosts the sympatric area that is more than one species occurs.

#### 1.10 Molecular phylogenetic studies

A phylogenetic is a representation of the evolutionary history of a group of related organism. Nucleotide or amino acid differences among homologous DNA or protein sequences can be used to reconstruct molecular phylogenetic tree. A phylogenetic analysis of nucleic acid or protein sequences is the determination of how the family might have been derived during evolution. It may also be used to follow the changes occurring in a rapidly changing species. Placing the sequences as outer branches on a tree depicts the evolutionary relationships among the sequences. The branching relationship on the inner of the tree then reflects the degree to which sequences are related. Two sequences that are very much alike were located as neighboring outside branches and were joined to a common branch beneath them. The object of phylogenetic analysis is to discover all of the branching relationships in the tree and branch lengths.

At present, molecular techniques such as DNA (deoxyribonucleic acid) and protein sequencing have been successfully used for construction of phylogenetic tree of life that allows assessment used relationships among animal taxa. Generally, DNA sequence data of highly conserved genes, for example, genes coding for ribosomal DNA (rDNA), are used in the studies. The rDNA array of eukaryotes is a region with many properties of high value for the molecular systematize.<sup>(71)</sup> Firstly, it is well known with partial or complete sequences available for a wide variety of organisms. Secondly, it is usually presented in a

large number of (typically identical) copies, which facilitates its amplification. Its most valuable characteristic is that it contains both highly conserved and highly variable regions.

The eukaryotic nuclear rDNA consists of conservative genes of 18S, 5.8S and 28S, and variable internal transcribed spacers (ITSs), namely ITS 1 and ITS 2. They have been widely used in phylogenetic analysis<sup>(72)</sup> for species level phylogeny as well as species identification.<sup>(73-77)</sup> The spacer regions, ITS1 and ITS2, of the rDNA gene are routinely used for the study on phylogenetic reconstruction, genetic variability and divergence of closely related species for a wide range of organism.<sup>(78-81)</sup>

Previously, systematic investigations have focused on the 18S DNA because these offer possibilities for resolving phylogenetic relationships among higher taxonomic categories. However, their information is not sufficient for phylogeny relation among closely related genera or species. Hence, a more rapidly evolving region needed to be analyzed.

### 1.11 Construction of the ITS gene sequence for the identification

Ribosomes are combining with two major subunits, each with distinct rRNAs and ribosomal proteins. Several distinct rRNAs compose of ribosomal proteins to form ribosomes, the organelles that direct protein synthesis from messenger RNA. The small ribosomal subunit contains a single type of rRNA and in prokaryotes about 20 proteins, in eukaryotes 30 proteins. The large ribosomal subunit contains two (prokaryotes) or three (eukaryotes) rRNAs and about 30 to 40 ribosomal proteins of prokaryotes and eukaryotes, respectively. A single copy of each of the proteins is present per ribosome. Because protein synthesis is a prerequisite for life, ribosomes (and hence rRNAs) are universally present in living systems.

The eukaryotes nuclear genome rDNA array is typically consisted of several hundred tenderly repeated copies of the transcription unit and nontranscribed spacer shown in Figure 10.<sup>(82)</sup> The number of copies of the this transcription unit; however, may be as few as one,<sup>(83)</sup> or as many as several thousands.<sup>(84)</sup> In prokaryotes, there are one to several copies of the rRNA genes and they may be either organized in a single operon (in which they are usually separated by tRNA genes) or dispersed throughout the genome.<sup>(85-87)</sup> There are usually three or four distinct nonorganellar rRNAs in a species<sup>(82, 88)</sup> which are often characterized in sedimentation velocity units "S" (Svedburg). Firstly, a large subunit rRNA, which ranges in size from 16S (approximately 1,500 nucleotides) in most prokaryote genomes, and up to 28S (over 4,000 nt) in eukaryote nuclear genomes.<sup>(89, 90)</sup> Secondly, a 5.8S rRNA (~ 160 nt) in eukaryotes, which is derived from a part of the 23S rRNA of

prokaryotes<sup>(66-69)</sup> and is still structurally, functionally and closely related to the large rRNA. Thirdly, a small subunit rRNA, which ranges from 12S (~900 nt) in vertebrate mitochondria to 6S (~1500 nt) in prokaryotes and up to 18S (~1800 nt) in eukaryotes.<sup>(91-93)</sup> Lastly, a 5S rRNA (~120 nt), the gene of which is closely associated with the other rRNA genes in many prokaryotes but is found elsewhere in the nuclear genome of most eukaryotes.<sup>(94)</sup> Although these are the most common themes, numerous variations have been discovered.<sup>(95, 96)</sup> The large and small subunit rRNA genes of chloroplasts and mitochondria are more similar to those of their eukaryotes hosts.<sup>(97-103)</sup>

The nucleotide sequence variation found in eukaryotes, two internal transcribed spacers (ITS1 and ITS2) separate the 18S, 5.8S and 28S gene (or their homologs) and an external transcribed spacer (ETS) is located upstream of the 18S gene (Figure\*). The transcribed spacers contain signals for processing the rRNA transcript. Adjacent copies of the rDNA repeat unit are separated by a nontranscribed spacers (NTS), also called an intergenic spacers by some workers. This region contains subrepeating elements that serve as enhancers of transcription.<sup>(104-108)</sup>

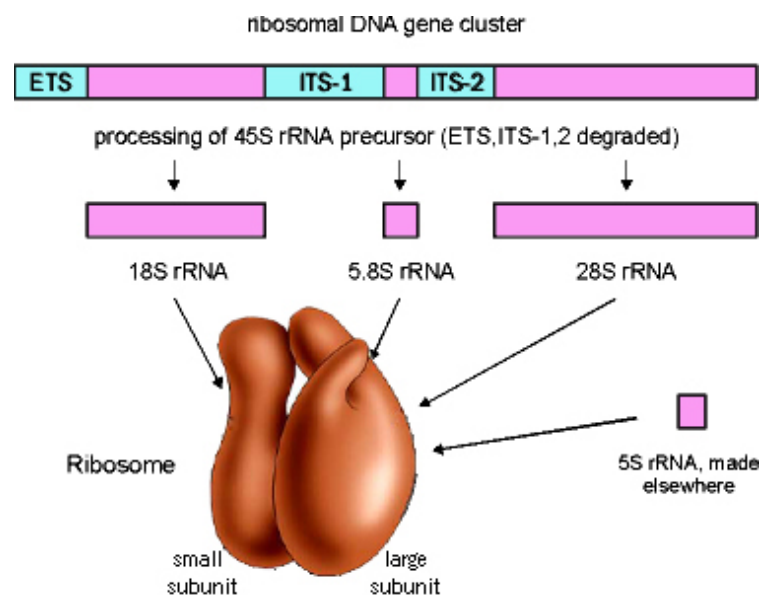


Figure 10 Structure of nuclear ribosomal DNA in eukaryotes.

### 1.12 Structure and evolution of rRNA: Implication for phylogenetic analysis

There is a variety for the reasons why rRNA genes have been selected as standard genes for molecular taxonomy and is useful for phylogenetic analysis. Firstly, rRNA is an essential constituent in all living organisms. Secondly, the existence of many conserved regions in the rRNA gene allows the alignment of their sequences derived from distantly related organisms. Additionally, the islands of highly conserved sequences within most rRNA genes are very useful for constructing 'universal' primers that can be used for sequencing each rRNA or rDNA from several species. For amplifying regions of interest by the use of PCR, or for use as probes in restriction enzyme analyses.<sup>(71, 109, 110)</sup> While intraindividual length heterogeneity causes problems for direct sequencing of amplified DNA in some regions of the repeat, the amplified DNA can be cloned and sequenced relatively simply.

The method of choosing a region that is expected to be appropriate for a particular systematic question is the most critical step in any phylogenetic analysis. If the region chosen is evolutionarily too conserved (i.e., the sequences are nearly the same in all study taxa), then considerable time will be wasted collecting invariant data. On the other hand, regions that differ among taxa to the extent that alignments are difficult or problematic, and are unlikely to yield robust phylogenies.<sup>(111)</sup> There are two reasons that highly divergent sequences yield less robust results: (1) the level of homoplasy (parallelisms, convergences and reversals) increases as the probability for change at each position increases and, (2) the number of probable alignments that are virtually equally good becomes prohibitively large. As alignment (positional homologs) is an assumption of the phylogenetic analysis, it is the best to delete any regions where the alignment is questionable.<sup>(111)</sup>

The mitochondrial rRNA gene evolves much more rapidly than the nuclear rRNA genes, and they can be used for most Cenozoic comparisons. They are easily amplified through use of the PCR.<sup>(109, 112)</sup>

Phylogenetic trees inferred from the spacer regions of rDNA arrays have been used less frequently<sup>(113-117)</sup> except in restriction analysis of entire rDNA arrays.<sup>(91, 118-126)</sup> These studies have shown that the spacer regions can be used to infer phylogeny among closely related taxa (taxa that have diverged within the last 50 million years). In addition, variation in the spacer regions has been used to identify species or strains and can be used as markers in population genetic studies.<sup>(123, 127-133)</sup> Among the spacers, the NTS evolves

most rapidly<sup>(134)</sup> and the transcribed spacers are somewhat more conserved.<sup>(135-137)</sup> Amplification of the two internal transcribed spacers using the PCR is facilitating by conserved flanking regions of the 18S, 5.8S and 28S genes. Consequently the use of these spacers for studying in the closely related species is increasing.

Due to the closely related characteristic features of *B. malayi* and *B. pahangi*, those make it difficult to precisely discriminate those two species, especially, in the case of mixed infection and/or their genetic diversities. Herein, we have focused on study on the genetic diversity of *Brugian* filaria in cat reservoirs using phylogenetic tree analysis based on ITS region. The data were beneficial for differentiation and identification of the *Brugia* spp. as well as epidemiological studies, the control and eradication of the parasite.

## CHAPTER 3

### MATERIALS AND METHODS

#### 1. Blood Samples

Blood samples of infected cats containing microfilaria of *Brugia* spp. were collected from endemic areas of Thailand, Lad Krabang district of Bangkok and Narathiwat. The samples were previously screened for *Brugia* spp. by using the traditional blood smear technique before undergoing the parasite isolation.

#### 2. Acid phosphatase activity staining

Blood samples of infected cats containing microfilaria of *Brugia* spp. was smeared on a glass slide and air dried. Then, the slides were fixed in acetone for 1 min at 4 °C. prior to incubation in Naphthol AS-TR phosphate and pararosaniline hydrochloride solution, wash the slides were washed with distilled water for 2-3 times, transferred to 95% alcohol solution and observed under light microscop.

#### 3. Isolation of parasites

Five milliliters of microfilaria infected blood were taken from host and transferred to a test tube containing 7 mg/ml of EDTA as an anticoagulant agent. The blood was diluted with equal volume of phosphate buffered saline, pH 7.0 (PBS; 0.137 M NaCl, 10 mM Na<sub>2</sub>HPO<sub>4</sub>, 3.2 mM KH<sub>2</sub>PO<sub>4</sub>) and filtered through a 5-µm polycarbonate membrane (Minipore). Microfilariae was then resuspended in PBS and centrifuged at 5,000 rpm for 10 min at 4 °C. The pellet of microfilariae was washed with PBS for three times prior to storage at -70 °C until use.

#### 4. Isolation of genomic DNA

The genomic DNA was extracted from filarial parasites by using genomic DNA Purification Kit (Gentra). The procedure of isolation was performed according to the instruction manual provided by the company. The microfilaria pellet were digested in 300 µl of Cell Lysis Solution (0.01 M Tris-2%, SDS-0.01 M, EDTA pH 8) and 1.5 µl of Proteinase K Solution (200 mg/ml) at 55 °C for 4-6 hr. After that, the lysate was further digested by the addition of 0.12 units of RNase A Solution (1 mg/ml in 5 mM Tris-HCl, pH 8.0) and

incubated at 37 °C for 15-60 min. A 100 µl of Protein Precipitation Solution (3 M ammonium acetate pH 7.4) was added to the cell lysate, quickly spun at high speed for 20 sec and centrifuged at 13,000 rpm for 3 min. Supernatant containing DNA was transferred to a new tube, precipitated by the addition of 300 µl of 100% isopropanol, and centrifuged at 13,000 rpm for 3 min. The supernatante was removed and DNA pellet was washed once with 300 µl of 70% ethanol. The sample were mixed and centrifuged at 13,000 rpm for 3 min. DNA pellet was dried (air-dry) for 10 mins, dissolved in 20 µl of DNA Hydration Solution (TE; 0.01 M Tris-0.001 M, EDTA pH 7.4) and incubated at 65 °C for 60 mins. The genomic DNA of parasites was stored at 4 °C until use. DNA concentration was determined by using UV spectrophotometer and the absorbance was measured at 260 nm. Molar extinction of DNA was calculated as; 1 O.D. at 260 nm = DNA concentration of 50 ng/ml.

## 5. DNA Primers

The sets of primer were used for amplification of the gene encoding for ITS1 and ITS2 from *Brugia* spp. The primers were designed based on the nucleotide sequence comparison among ITS1 and ITS2 genes of *Brugia* spp.

## 6. PCR amplification of the ITS1, and ITS2 regions

6.1 PCR amplification of ITS1 gene from purified parasite DNA was performed by using specific primers, ITS1F and ITS1R. (Table 2)

Table 2 Nucleotide sequences of specific primers, ITS1F and ITS1R.

| Primers                | Nucleotide sequences                  | Tm   | Ref |
|------------------------|---------------------------------------|------|-----|
| Forward primer (ITS1F) | 5'...GGT GAA CCT GCG GAA GGA TC... 3' | 75°C | (8) |
| Reverse primer (ITS1R) | 5'...AAC CCA ATG GTG CAA TGT GC... 3' | 73°C | (8) |

All reactions were manipulated in 25 µl volume containing 50 ng of genomic DNA in 10x PCR buffer (200 mM Tris-HCl (pH 8.4), 500 mM KCl), 1 µM each of primers, 100 µM each of dATP, dTTP, dCTP and dGTP, 1.5 mM MgCl<sub>2</sub> and 1.5 units of *Taq* DNA

polymerase (GIBCOBRL<sup>®</sup>). Sterile distilled water was added to adjust volume to 25 µl. PCR was performed by using DNA thermal cycler (MJ Research PTC-200 Peltier thermal cycler) for 30 cycles. Each cycle were consisted of denaturation at 94 °C for 1 min, annealing at 65 °C for 1 min, and extension at 72 °C for 1 min. The PCR products were analyzed by electrophoresis on 1.5 % agarose gel at 110 Volts for approximately 30 min prior to staining with ethidium bromide and observation under ultraviolet light.

6.2 PCR amplifications of ITS2 gene of purified parasites DNA were performed by using specific primers namely ITS2F and ITS2R. (Table 3)

Table 3 Nucleotide sequences of specific primers, ITS2F and ITS2R.

| Primers                | Nucleotide sequences                | Tm    | Ref. |
|------------------------|-------------------------------------|-------|------|
| Forward primer (ITS2F) | 5'...GGT TGA TTC CCG ATG GTA ... 3' | 43 °C | (8)  |
| Reverse primer (ITS2R) | 5'...AGC GGG TAA TCA CGA CTG ... 3' | 45 °C | (8)  |

All reactions were manipulated in 25 µl volume containing 50 ng of genomic DNA in 10x PCR buffer (200 mM Tris-HCl (pH 8.4), 500 mM KCl), 1 µM each of primers, 100 µM each of dATP, dTTP, dCTP and dGTP, 1.5 mM MgCl<sub>2</sub> and 1.5 units of *Taq* DNA polymerase (GIBCOBRL<sup>®</sup>). Sterile distilled water was added to adjust volume to 25 µl. PCR was performed by using DNA thermal cycler (MJ Research PTC-200 Peltier thermal cycler) for 30 cycles. Each cycle were consisted of denaturation at 94 °C for 1 min, annealing at 41 °C for 1 min and extension at 72 °C for 1 min. The PCR products were analyzed by electrophoresis on 1.5 % agarose gel at 110 Volts for approximately 30 mins prior to staining with ethidium bromide and observation under ultraviolet light.

## 7. Cloning of the PCR fragment

### 7.1 Purification of PCR fragment

The PCR fragment was eluted from the gel and purified by using QIAGEN<sup>®</sup> Purification system prior to cloning. The procedure of purification was performed according to the instruction manual provided by the company. The DNA fragment was excised from the agarose gel with a clean, sharp scalpel. The gel slice was weighed in a colorless tube and added 3 volumes of Buffer QG (4 M guanidine thiocyanate pH 7.5) to 1 volume of gel. Then, the gel slice was incubated at 50 °C for 10 mins until the gel slice was completely dissolved. After that, the color of the mixture was checked and it should be yellow. After that, 100-200 µl of isopropanol were added to the reaction and mixed. The mixture was placed into a QIAquick spin column, centrifuged at 10,000 rpm for 1 min, discarded flow-through and placed QIAquick column back in the same collection tube. Then, the DNA bound QIAquick column was washed with 0.5 ml of Buffer QG and centrifuged at 10,000 rpm for 1 min followed by washing with 0.75 ml of Buffer PE (3 M sodium acetate in 80% ethanol) to QIAquick column and centrifuged at 10,000 rpm for 1 min. The DNA bound QIAquick column was centrifuged again at 10,000 rpm for 1 min and placed QIAquick column into a clean 1.5 ml microcentrifuge tube. The DNA was eluted with 50 µl of Buffer EB (10 mM Tris-Cl, pH 8.5). The column was centrifuged at 10,000 rpm for 2 min.

### 7.2 Ligation of PCR fragment and vector

The purified 200 ng of PCR fragment were further ligated to the pGEM<sup>®</sup>-T Easy vector using protocol of pGEM<sup>®</sup>-T Easy Vector Systems (Invitrogen, Promega). The reaction were consisted of 4 µl of PCR product, 1 µl of 2X Rapid Ligation Buffer (60 mM Tris-HCl, pH 7.8, 20 mM MgCl<sub>2</sub>, 20 mM DTT, 2 mM ATP 10% PEG), 1 µl of the pGEM<sup>®</sup>-T Easy vector and 1 µl of T4 DNA Ligase (3 Unit final concentration). The reaction was mixed and incubated for 12-14 hr at 4 °C.

### 7.3 Preparation of ultra-competent *E. coli* cells for transformation

The competent *E. coli* cells were prepared for transformation. Single colony of selected *E. coli* strain (DH5α) was cultured in 5 ml of LB-broth and incubated for 12-14 hr at 37 °C with moderate agitation (~250 rpm). Then, 1 ml of the overnight culture were added to 150 ml of LB-broth and grown at 37°C with moderate agitation until lag phase. (the OD<sub>600</sub> nm ≈ 0.5) Subsequently, the culture was placed on ice for 10 min and centrifuged at 5,000 rpm for 10 min at 4°C. The bacteria pellet was washed twice in 10 ml

and 5 ml of sterile 10% glycerol and, centrifuged 5,000 rpm at 4°C for 10 min. Finally, the pellet was resuspended in 0.02-0.2 ml of cold 10% glycerol, and aliquots of 40 µl were transferred to a new eppendorf tubes for further transformation or kept at -70°C until use.

#### 7.4 Transformation by electroporation

Electroporation transformation was performed by using BioRad MicroPulser (BIO-RAD MicroPulser™) according to the protocols provided by the company. BioRad MicroPulser was set to "Ec 2" for 2 mm cuvettes (2.50kV). Four microliters of the ligation product were added to the competent cells. Transformation reaction was transferred to a chilled electroporation cuvette, and immediately pulsed in the electroporator. Then, 250 µl of LB broth were added to the reaction. The mixture was transferred into 1.5 ml eppendorf tubes and incubated at 37 °C for 45 mins.

After that, 100 to 150 µl of the mixture were spread on the LB-ampicillin agar plates containing X-gal and IPTG (40 µl of 20 mg/ml X-gal and 10 µl of 200 mg/ml IPTG were spread on the LB-ampicillin agar plates 30 minutes prior to plating the transformations). The plates were incubated for 17 hrs at 37 °C. Colonies containing plasmids without inserts were blue color. Colonies containing plasmids with inserts remained white and were selected for further examination by transferring to a new LB-ampicillin agar plate containing X-gal and IPTG for verification of the phenotype.

### 8. Recombinant DNA purification

White colonies containing the recombinant DNAs were selected and cultured in 5 ml of LB media in the presence of 100 µg/ml of ampicillin for 24 hrs. The recombinant DNAs were purified by using QIAGEN® QIAprep Spin Miniprep Kit Protocol. The procedure of extraction was performed according to the instruction manual provided by the company. The *E. coli* cells containing recombinant DNA were grown in 5 ml of Luria Bertani broth for 12-14 hr at 37 °C. Each culture was transferred to a microcentrifuge tube and centrifuged for 1 min at 5,000 rpm to harvest the cells by using an eppendorf microcentrifuge. The supernatant was removed and each cell pellet was resuspended by spinning in 250 µl of "Buffer P1" (2 mg/ml lysozyme, 50 mM glucose, 10 mM CDTA (cyclohexane diamine tetraacetate), 25 mM Tris-HCl, pH 8.0). After resuspension of the pellet, 250 µl of Buffer P2 (0.2 N NaOH, 1% SDS (sodium dodecyl sulfate)) were added to the mixture and the tube were gently inverted for 4-6 times. Then, 350 µl of Buffer N3 (3 M NaOAc (sodium acetate), pH 4.8) were added and the solution was mixed gently but

thoroughly, immediately after addition of Buffer N3. All reactions were centrifuged at 13,000 rpm for 10 min. Then, the supernatant was applied from top step into the QIAprep Spin Column, centrifuged at 10,000 rpm for 1 min. After that, QIAprep Spin Column was washed by 0.5 ml of Buffer PB (contains guanidine hydrochloride and isopropanol) and followed by centrifugation at 10,000 rpm for 1 min. Subsequently, QIAprep Spin Column was washed with 0.75 ml of Buffer PE (3 M sodium acetate in 80% ethanol and centrifuged at 10,000 rpm for 1 min. The flow-through was discarded and the column was placed for centrifugation at 10,000 rpm for 1 min. The QIAprep column were transferred to a clean 1.5 ml microcentrifuge tube and DNA was eluted with 20 µl of Buffer EB (10 mM Tris-Cl, pH 8.5) prior to centrifugation at 10,000 rpm for 2 min.

## 9. Data analysis of inserted the ITS1, and ITS2 regions

The purified recombinant DNAs were tested by PCR amplification and restriction enzyme digestion. The PCR reaction was performed according to the methods described above. Each of restriction enzyme digestions was manipulated in 20 µl volume containing 100-200 ng of the purified recombinant DNA, 10x buffer *EcoRI* (50 mM Tris-HCl (pH 7.5), 10 mM MgCl<sub>2</sub>, 100 mM NaCl, 0.02% Triton X-100, 0.1 mg/ml BSA.) and 10 unit of *EcoRI* (GIBCOBRL<sup>®</sup>). The reaction was subsequently incubated at 37 °C for 4 hr and followed by heating at 68 °C for 10 min. The PCR product or the digested product was analyzed by electrophoresis on 1.2% agarose gel at 110 Volts prior to ethidium bromide staining and observation under ultraviolet light.

## 10. DNA sequencing of the ITS1, and ITS2 regions

The DNA sequence analysis was performed by Macrogen. DNA sequencing was performed using by Big Dye Terminator Cycle Sequencing procedure and analyzed by using ABI PRISM 3100 (Perkin Elmer). The PCR condition for DNA sequencing was accomplished by using 25 cycles of denaturation at 95°C for 5 secs, annealing at 50°C for 4 sec and extension at 60°C for 4 min. The nucleotide sequencing data were analyzed by using software of ABI PRISM Model 3100 version 3.7 and analysis procedure was accomplished according to the manual instruction provided company.

## 11. Analysis of the nucleotide sequences of the ITS1, and ITS2 regions

The partial and complete nucleotide sequences of ITS1 and ITS2 were analyzed by using BLAST program from <http://www.ncbi.nlm.gov/BLAST>. The nucleotide sequence of interested gene fragments was compared to those of various organisms that have been previously submitted in GenBank. The percentage of nucleotide and amino acid sequence homology in comparison to various organisms were reported. All sequence data were analyzed by using Clustal W sequence alignment program for The European Molecular Biology Laboratory (EMBL, U.K.) at <http://www.ebi.ac.uk/>. All alignment data were inspected with sequence data in GenBank by using PAUP program version 4.0b10<sup>(138)</sup> for construction of evolutionary trees of ITS1, and ITS2.

Table 4 Nucleotide sequences of primers for PCR amplification of the ITS1 and ITS2 regions

| Primers         | Names | Nucleotide sequences<br>( 5' → 3' ) | Tm<br>( °C ) | Ref. |
|-----------------|-------|-------------------------------------|--------------|------|
| Forward primers | ITS1F | ...GGT GAA CCT GCG GAA GGA TC...    | 75 °C        | (8)  |
|                 | ITS2F | ...GGT TGA TTC CCG ATG GTA ...      | 43 °C        | (8)  |
| Reverse primers | ITS1R | ...AAC CCA ATG GTG CAA TGT GC...    | 73 °C        | (8)  |
|                 | ITS2R | ...AGC GGG TAA TCA CGA CTG ...      | 45 °C        | (8)  |

## CHAPTER 4

### RESULTS

#### 1. Acid phosphatase activating staining

The microfilaria of *Brugia* spp. from cat 1-7 were investigated by acid phosphatase activity staining of blood smear from cat1-7 were observed under light microscope shown in Figure 11. The data revealed that *B. malayi* was found in cat 1-5 whereas *B. pahangi* was existed in cat 6-7

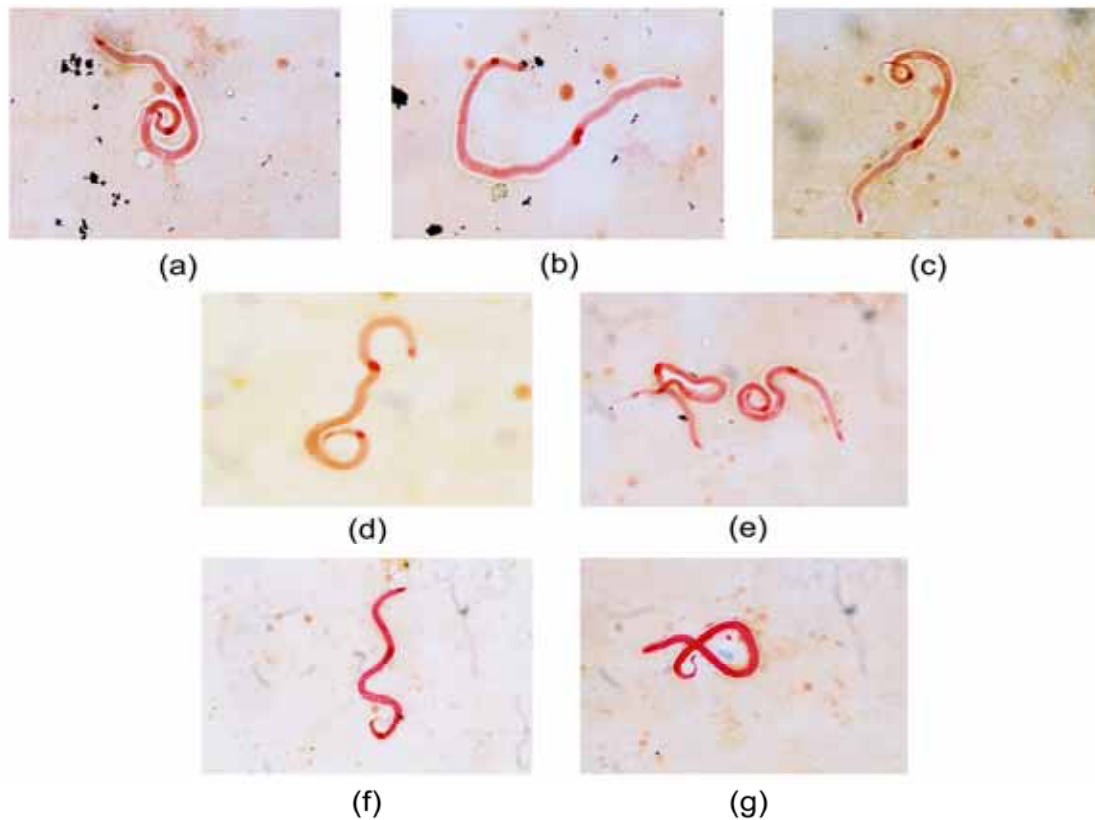


Figure 11 Acid phosphatase staining of blood smear from (a) cat1, (b) cat2, (c) cat3 , (d) cat4, (e) cat5, (f) cat6 and (g) cat7

## 2. *B. malayi* genomic DNA extraction

The genomic DNA of *B. malayi* was extracted from one sample as described in Materials and Methods 3. Agarose gel electrophoresis was used to determine genomic DNA before PCR amplification. A single band of high molecular weight DNA size of more than 23 kb was observed after ethidium bromide staining as shown in Figure 12. The quantity and purity of the DNA were investigated by measurement of the absorbance at 260 nm and 280 nm and shown that they were 0.001 and 0.002 with the ratio of  $A_{260}/A_{280} = 0.5$ .

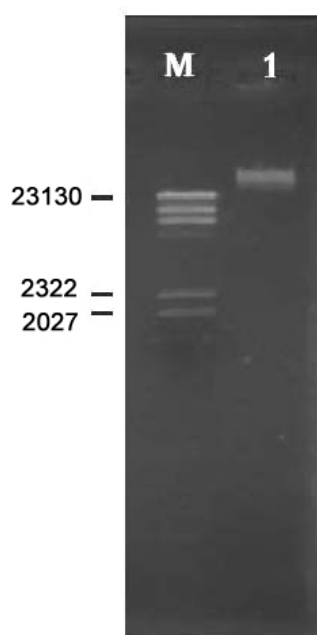


Figure 12 Electrophoresis profile of 50 ng *B. malayi* genomic DNA in 0.8% agarose gel.

Lane M: Lamda *Hind* III marker

Lane 1: 50 ng of *B. malayi* genomic DNA

### 3. PCR amplification and DNA sequencing of ITS1 region

#### 3.1 PCR amplification of ITS1 region

The PCR amplification of ITS1 region from 7 cat reservoirs was performed and analyzed according to the Materials and Methods 5. Figure 14 showed that the PCR product of approximately 580 bp in size when primers ITS1F and ITS1R was used

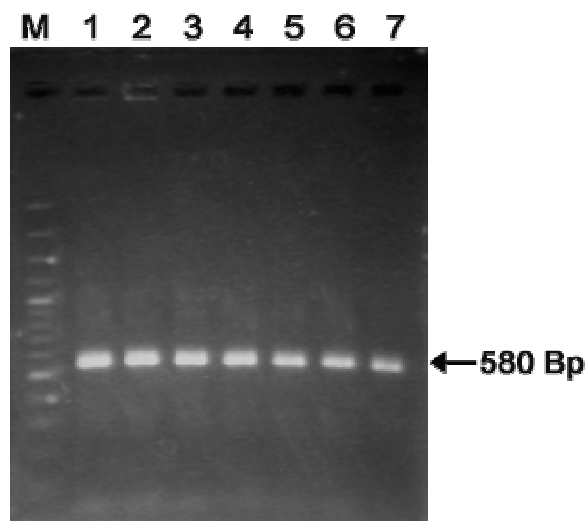


Figure 13 The PCR amplification of ITS1 from purified genomic DNA of *Brugia* spp. from cats in Narathiwat and Lad krabang by using ITS1F and ITS1R as primers. The PCR product of 580 bp in size was observed on 1.2% agarose gel electrophoresis. Lane M = 100 bp DNA ladder marker. Lanes 1-7 represent PCR products of *Brugia* spp. amplified from cat1-7, respectively.

#### 3.2 DNA sequencing of ITS1 region

PCR products of ITS1 genes amplified from *Brugia* spp. of 7 cat reservoirs by using ITS1F and ITS1R were used for cloning and DNA sequencing. Among ITS1 clones, 235 clones were randomly selected as shown in the Table 5. The nucleotide sequence data of ITS1 were shown in Table 6 (see visual CD in this thesis).

Table 5 Summary of 235 clones of *Brugia* spp. ITS1 region from 7 cat reservoirs.

| Cats  | Clones                                                                                                    |
|-------|-----------------------------------------------------------------------------------------------------------|
| Cat 1 | C1-C13, C15-C25, C27-C57, C61-C68                                                                         |
| Cat 2 | C1-C7                                                                                                     |
| Cat 3 | C1-C7                                                                                                     |
| Cat 4 | C1-C5                                                                                                     |
| Cat 5 | C1-C2, C4-C5, C7, C9-C10, C12, C17, C20, C22, C26, C28, C32-C40, C43, C46, C49-C51, C53, C55-C58, C60-C66 |
| Cat 6 | C1-C4, C6-C38, C40-C59, C61-C66                                                                           |
| Cat 7 | C1-C2, C4, C6-C10, C13-C23, C25-C29, C30-C49, C51-C52, C55- C59                                           |

### 2.3 Identification and analysis of ITS1 nucleotide sequence data.

BLAST program was used for identification of 235 clones selected from feline *Brugia* spp. ITS1 nucleotide sequences in comparison to the previously reported data of *B. malayi*, *B. pahangi*, and *D. immitis* were obtained from GenBank (Table 7 and Table 8) (see visual CD in this thesis). Sources of *Brugia* spp. from Cat 1-7 was show in Table 9. The reference clones of *Brugia* spp. ITS1 region from 7 cat reservoirs were listed in Table 10. Upon alignment using Clustal W, some nucleotide regions were deleted to generate the appropriate alignment and the sequences were manually corrected. The nucleotide sequences from 235 clones revealed that they were mainly classified as *B. malayi* or *B. pahangi*. The alignment of ITS1 region was shown in Table 11. (see visual CD in this thesis).

Table7 Sources of *B. malayi* and *B. pahangi* from GenBank using for phylogenetic tree construction based on ITS1 region.

| Samples                      | Geographical Area | References |
|------------------------------|-------------------|------------|
| <i>D. immitis</i> (AF217800) | Taiwan            | (139)      |
| <i>B. malayi</i> (AY499507)  | Thailand          | (140)      |
| <i>B. malayi</i> (AY621464)  | Thailand          | (140)      |
| <i>B. malayi</i> (AY621465)  | Thailand          | (140)      |
| <i>B. malayi</i> (AY621466)  | Thailand          | (140)      |
| <i>B. malayi</i> (AY621467)  | Thailand          | (140)      |
| <i>B. malayi</i> (AY621468)  | Thailand          | (140)      |
| <i>B. pahangi</i> (AY621469) | Thailand          | (140)      |
| <i>B. pahangi</i> (AY621470) | Thailand          | (140)      |
| <i>B. pahangi</i> (AY621471) | Thailand          | (140)      |
| <i>B. pahangi</i> (AY621472) | Thailand          | (140)      |

Table9 Sources of *Brugia* spp. from Cat 1-7 using in phylogenetic tree construction based on ITS1 region.

| Samples                       | Geographical Area     | References |
|-------------------------------|-----------------------|------------|
| <i>Brugia</i> spp. from Cat 1 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 2 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 3 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 4 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 5 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 6 | Lad Krabang, Thailand | (8)        |
| <i>Brugia</i> spp. from Cat 7 | Lad Krabang, Thailand | (8)        |

Table 10 Reference clones of *Brugia* spp. ITS1 region from 7 cat reservoirs

| Cats  | Clones   | Clones Reference <sup>(8)</sup>   |
|-------|----------|-----------------------------------|
| Cat 1 | C61-C68  | C1-C8                             |
| Cat 2 | C1-C7    | C15, C19, C22, C30, C36, C46, C48 |
| Cat 3 | C1-C7    | C12, C23, C30, C31, C54, C58, C62 |
| Cat 4 | C1-C5    | C3, C4, C28, C33, C38             |
| Cat 5 | C60-C66  | C7, C8, C9, C13, C17, C36, C41    |
| Cat 6 | C61-C66  | C2, C5, C6, C8, C10, C45          |
| Cat 7 | C55- C59 | C3, C9, C18, C22, C41             |

### 3.4 Phylogenetic tree construction of *Brugia* spp. based on ITS1 region

Phylogenetic tree construction based on ITS1 nucleotide sequences was analyzed by using PAUP program version 4.0b10 with DNA Parsimony (DNA PARS).

For maximum parsimony analysis and bootstrap of 50% majority rule consensus tree showing stability for the trees. The heuristic search strategy was utilized to find the most parsimonious trees using the parameters as followed; the number of substitution types = 2 (HKY85 variant), transition/ transversion ratio = estimate, distribution of rates at variable sites = gamma (discrete approximation) and shape parameter (alpha) = estimate. The bootstrap maximum parsimony was analyzed with 100 replicates, number of trees held at each step during stepwise addition = 1, initial 'MaxTrees' setting = 100, addition sequence = as-is and Branch-swapping algorithm = tree-bisection-reconnection (TBR), all minimal trees saved and zero branch lengths collapsed; all characters were assigned equal weight.

#### 3.4.1 DNA Parsimony

The parsimony cladogram revealed 4 types of ITS1 were observed. Type 1A was the most commonly found in both *B. malayi* (AY499507, AY621464, AY621465, AY621466, AY621467 and AY621468) and *B. pahangi* (AF621469, AF621470, AF621471 and AF621472) and comprised 205 clones of cat 1-7 contain this type of ITS1. The tree

indicated that Type 1B, Type 1C and Type 1D were the minor groups contained of 5 clones from cat 5, 21 clones from cat 1 and 4 clones from cat 6 and 7, respectively. These tree ITS1 types appeared to diverse from the common type 1A with highly the support of bootstrap value at 84%, 94% and 73%, respectively (Figure 14).

The parsimony cladogram of using ITS1 clones of *Brugia* from *Brugia* spp of cat1 exhibited 2 major groups the parasites were obtained by using *D. immitis* as the outgroup. Group 1 were Type 1A comprised of 2 subtypes 1Aa and 1Ab, Type 1Aa contain of *B. malayi* from GenBank and 41 clones of cat 1 with high bootstrap value of 78%. Type 1Ab contained *B. pahangi* from GenBank with high bootstrap value of 98%. Group 2 were Type 1B of which 21 clones from cat 1 with low bootstrap value of 57% (Figure 15).

The parsimony cladogram of Cat5 base on ITS1 region exhibited 3 major groups the parasites were obtained by using *D. immitis* as outgroup. Group 1 were Type 1Aa comprised of *B. malayi* from GenBank and 25 clones of cat 5 with moderate bootstrap value of 63%. Group 2 was Type 1Ab comprised of *B. pahangi* from GenBank and 7 clone of cat 5 with high bootstrap value of 72%. Group 3 was Type 1B comprised of 5 clones of cat 5 with high bootstrap value of 77% (Figure 16).

The parsimony cladogram of Cat6 base on ITS1 region exhibited 2 major groups the parasites were obtained by using *D. immitis* as outgroup. Group 1 were Type 1A comprised of 2 subtypes 1Aa and 1Ab, Type 1Aa contain of *B. malayi* from GenBank with high bootstrap value of 96%, Type 1Ab contained *B. pahangi* from GenBank and 60 clones of cat 6 with high bootstrap value of 95%. Group 2 were Type 1D of which 2 clones from cat 6 with high bootstrap value of 100% (Figure 17).

The parsimony cladogram of Cat7 base on ITS1 region exhibited 2 major groups the parasites were obtained by using *D. immitis* as outgroup. Group 1 were Type 1A comprised of 2 subtypes 1Aa and 1Ab, Type 1Aa contain of *B. malayi* from GenBank with moderate bootstrap value of 61%, Type 1Ab contained *B. pahangi* from GenBank and 49 clones of cat 7 with high bootstrap value of 82%. Group 2 were Type 1D of which 2 clones from cat 7 with high bootstrap value of 100% (Figure 18).

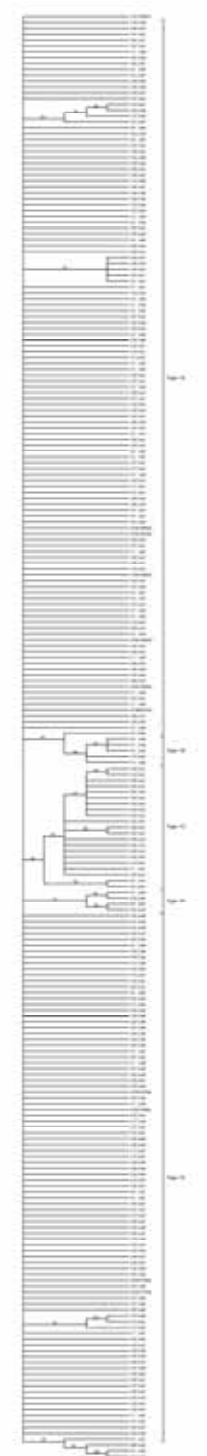


Figure 14 A pasimony cladogram of 235 clones of ITS1 region form feline *Brugia* spp. against *B. malayi*, *B. pahangi*, and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS1 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

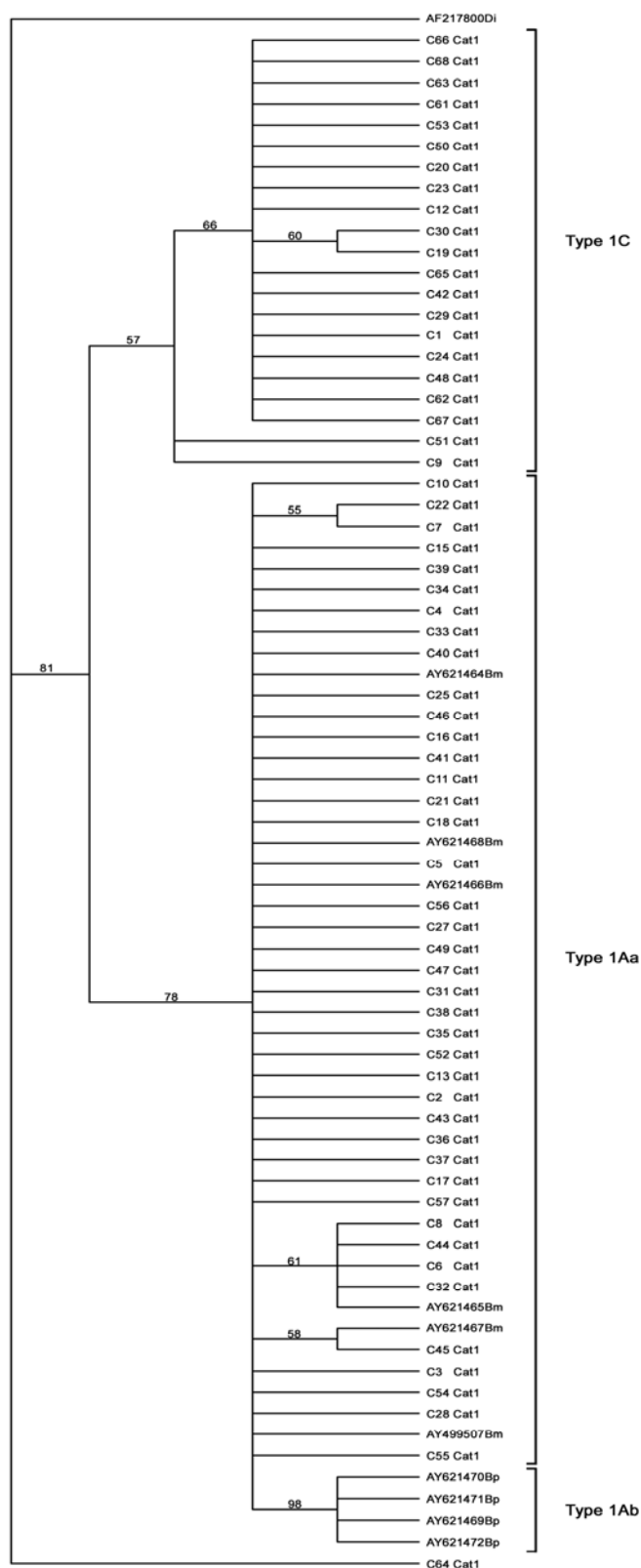


Figure 15 A pasimony cladogram of 63 clones of ITS1 region from cat1 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS1 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.



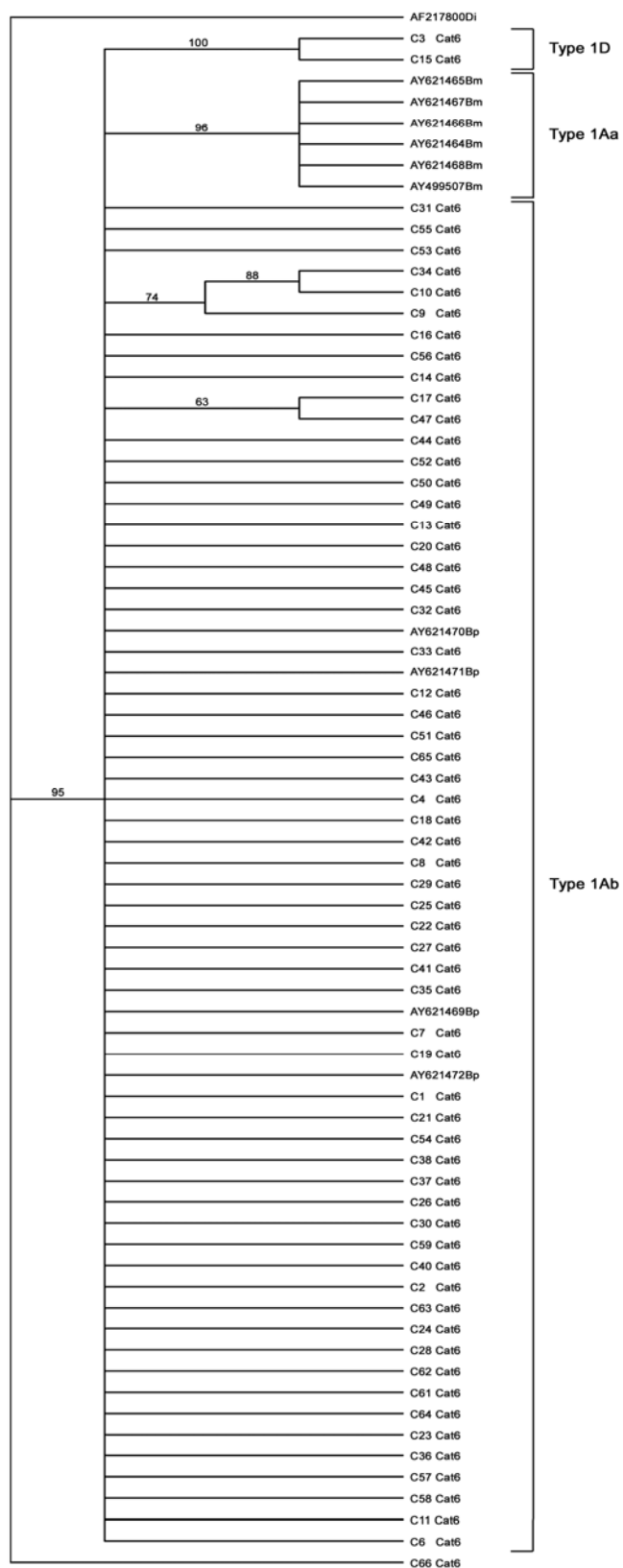


Figure 17 A pasimony cladogram of 63 clones of ITS1 region from cat6 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS1 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

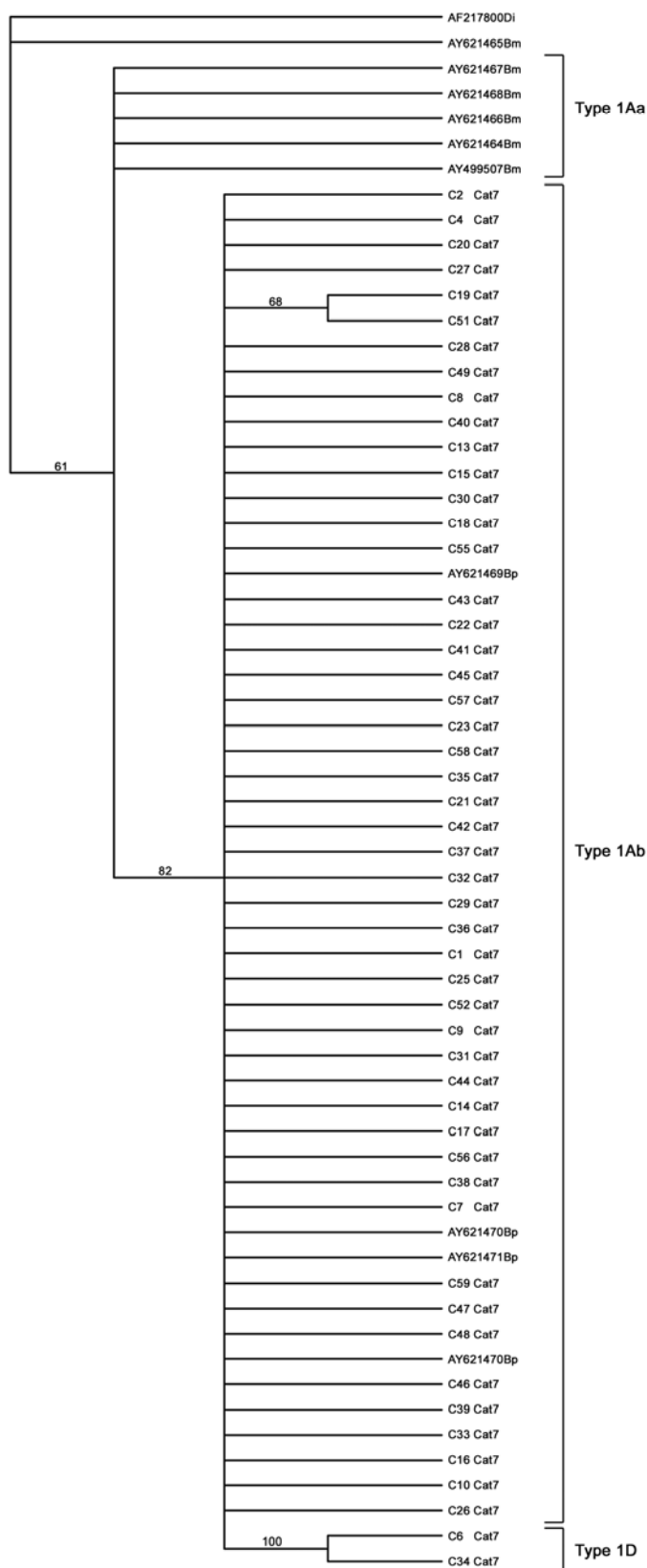


Figure 18 A pasimony cladogram of 51 clones of ITS1 region from cat7 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS1 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

#### 4. PCR amplification and DNA sequencing of ITS2 region

##### 4.1 PCR amplification of ITS2 region

The PCR amplification of ITS2 region from 7 cat reservoirs was performed and analyzed according to the Materials and Methods 5. Figure 17 showed that the PCR product of approximately 660 bp in size was observed ITS2F and ITS2R as primers.

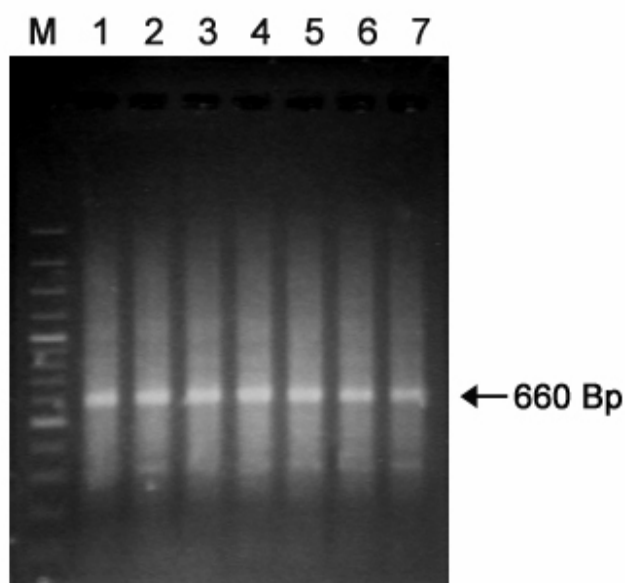


Figure 19 The PCR amplification of ITS2 from purified genomic DNA of *Brugia* spp. from cats in Narathiwat and Lad krabang using ITS2F and ITS2R as primers. The PCR product of 660 bp in size was observed on 1.2% agarose gel electrophoresis. Lane M = 100 bp DNA ladder marker. Lanes 1-7 represent PCR products of *Brugia* spp amplified from cat1-7, respectively

##### 4.2 DNA sequencing of ITS2 region

PCR products of ITS2 genes amplified from *Brugia* spp. of 7 cat reservoirs using ITS2F and ITS2R were used for cloning and DNA sequencing. Among ITS2 clones, 242 of them were randomly selected as shown in Table 12. The nucleotide sequence data of ITS2 were shown in Table 13. (See visual CD in this thesis).

Table 12 Summary of 242 clones of *Brugia* spp. ITS2 region from 7 cat reservoirs.

| Cats  | Clone                                                                    |
|-------|--------------------------------------------------------------------------|
| Cat 1 | C1-C6, C8-C12, C14-C17, C19-C33, C35, C38-C40, C42-C46, C49-C50, C52-C59 |
| Cat 2 | C1-C23, C25-C38, C40-C43, C45-C46, C48-C52, C55-C60                      |
| Cat 3 | C1-C6                                                                    |
| Cat 4 | C1-C7                                                                    |
| Cat 5 | C1-C7                                                                    |
| Cat 6 | C1-C19, C21-C31, C33, C35-C50, C53-C66                                   |
| Cat 7 | C1-C12, C14-C37, C39, C41-C50, C52-C62                                   |

#### 4.3 Identification and analysis of ITS2 nucleotide sequence data.

BLAST program was used for identification of 242 clones selected from feline *Brugia* spp. ITS2 nucleotide sequences in comparison to the previously reported data of *B. malayi*, *B. pahangi*, *B. timori* and *D. immitis* obtained from GenBank (Table 14 and Table 15) (See visual CD in this thesis). Sources of *Brugia* spp. from Cat 1-7 was shown in Table 16. The reference clones of *Brugia* spp. ITS2 region from 7 cat reservoirs were listed in Table 17. Upon alignment using Clustal W, some nucleotide regions were deleted to generate the appropriate alignment and the sequences were manually corrected. The nucleotide sequences from 242 clones revealed that they were mainly classified as *B. malayi* or *B. pahangi*. The alignment of ITS2 region was shown in Table 18. (See visual CD in this thesis).

Table 14 Sources of *B. timori*, *B. malayi*, and *B. pahangi* from GenBank using for phylogenetic tree construction based on ITS2 region.

| Samples                      | Geographical Area      | References |
|------------------------------|------------------------|------------|
| <i>D. immitis</i> (AF217800) | Taiwan                 | (139)      |
| <i>B. malayi</i> (AY988599)  | unpublished            | (141)      |
| <i>B. malayi</i> (AF499130)  | Sulawesi, Indonesia    | (142)      |
| <i>B. pahangi</i> (AY988600) | unpublished            | (141)      |
| <i>B. timori</i> (AF499132)  | Alor Island, Indonesia | (142)      |

Table16 Sources of *Brugia* spp. from Cat 1-7 using in phylogenetic tree construction based on ITS2 region.

| Samples                       | Geographical Area     | References |
|-------------------------------|-----------------------|------------|
| <i>Brugia</i> spp. from Cat 1 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 2 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 3 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 4 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 5 | Narathiwat, Thailand  | (8)        |
| <i>Brugia</i> spp. from Cat 6 | Lad Krabang, Thailand | (8)        |
| <i>Brugia</i> spp. from Cat 7 | Lad Krabang, Thailand | (8)        |

Table17 Reference clones of *Brugia* spp. ITS2 region from 7 cat reservoirs

| Cats  | Clone   | Clones Reference <sup>(8)</sup>     |
|-------|---------|-------------------------------------|
| Cat 1 | C55-C59 | C2, C4, C10, C28, C32               |
| Cat 2 | C55-C60 | C2, C4, C5, C6, C8, C52             |
| Cat 3 | C1-C6   | C2, C3, C6, C13, C39, C45           |
| Cat 4 | C1-C7   | C2, C7, C24, C26, C34, C35, C37     |
| Cat 5 | C1-C7   | C6, C9, C10, C28, C34, C57, C62     |
| Cat 6 | C61-C66 | C3, C5, C6, C8, C9, C16             |
| Cat 7 | C55-C62 | C4, C8, C9, C24, C37, C45, C54, C56 |

#### 4.4 Phylogenetic analysis of *Brugia* spp. based on ITS 2 region

Phylogenetic tree construction based on ITS2 nucleotide sequences was analyzed by using PAUP program version 4.0b10 with DNA Parsimony (DNA PARS).

For maximum parsimony analysis and bootstrap, 50% majority rule consensus tree showed stability for the trees. The heuristic search strategy was utilized to find the most parsimonious trees using the parameters as followed; the number of substitution types = 2 (HKY85 variant), transition/ transversion ratio = estimate, distribution of rates at variable sites = gamma (discrete approximation) and shape parameter (alpha) = estimate. The bootstrap maximum parsimony was analyzed with 100 replicates, number of trees held at each step during stepwise addition = 1, initial 'MaxTrees' setting = 100, addition sequence = as-is and Branch-swapping algorithm = tree-bisection-reconnection (TBR), all minimal trees saved and zero branch lengths collapsed; all characters were assigned equal weight.

##### 4.4.1 DNA Parsimony

According to the ITS2 tree, one major group in group could separate to 8 types, Type 2A comprised with *B. malayi* from GenBank, *B. pahangi* from GenBank, 40 clones of cat 1, 50 clones of cat 2, 6 clones of cat 3, 7 clones of cat 4, 7 clones of cat 5, 51 clones of cat 6 and 55 clones of cat 7 with high bootstrap value of 79%. Type 2B contained *B. malayi*(AF499130), *B.timori*(AF499132) from GenBank, 2 clones of cat 1 and 4 clones of cat 6 with high bootstrap value of 99%. Type 2C composed of 2 clones of cat 1, 2 clones of cat 2, 1 clone of cat 6 and 1 clone of cat 7 with high bootstrap value of 74%.

Type 2D consisted of 1 clones of cat 1 and 1 clone of cat 6 with high bootstrap value of 100%. Type 2E comprised of 3 clones of cat 6 and 1 clone of cat 7 with high bootstrap value of 100%. Type 2F contained 1 clone of cat 1 and 1 clone of cat 6 with high bootstrap value of 89%. Type 2G consisted of 2 clones of cat 2 with high bootstrap value of 97%. Type 2H composed of 2 clone of cat 1 and 1 clone of cat 7 with high bootstrap value of 99%(Figure 20).

The parsimony cladogram of cat1 base on ITS2 region exhibited one major group in group could separate to 3 types, Type 2Aa comprised of *B. malayi* from GenBank and 42 clones of cat 1 with low bootstrap value of 57%. Type 2B comprised of 2 subtype, 2Ba and 2Bb, Type 2Ba contained *B.malayi*(AF499130), *B.timori*(AF499132) from GenBank, 2 clones of cat 1 with high bootstrap value of 100% and 2Bb contain of *B. pahangi*(AY988600) from GenBank with hight bootstrap value of 100. Type 2H comprised of 3 clones of cat 1 with high bootstrap value of 100%(Figure 21).

The parsimony cladogram of cat2 base on ITS2 region exhibited one major group in group can separate to 3 types, Type 2A comprised of *B. malayi*, *B. pahangi* from GenBank and 51 clones of cat 2 with high bootstrap value of 90%. Type 2B comprised of *B. malayi*(AF499130), *B.timori*(AF499132) from GenBank, with high bootstrap value of 92%. Type 2G comprised of 2 clones of cat 2 with high bootstrap value of 100% (Figure 22).

The parsimony cladogram of cat6 base on ITS2 region exhibited one major group in group can separate to 3 types, Type 2A comprised of *B. malayi*, *B. pahangi* from GenBank and 54 clones of cat 6. Type 2B comprised of, *B. malayi*(AF499130), *B.timori*(AF499132) and 4 clones of cat 6 with high bootstrap value of 99%. Type 2E comprised of 3 clones of cat 6 with high bootstrap value of 96% (Figure 23).

The parsimony cladogram of cat7 base on ITS2 region exhibited one major group in group can separate to 2 types, Type 2A comprised of *B. malayi*, *B. pahangi* from GenBank and 58 clones of cat 7. Type 2Ba comprised of, *B. malayi*(AF499130), *B.timori*(AF499132) with high bootstrap value of 99% (Figure 24).

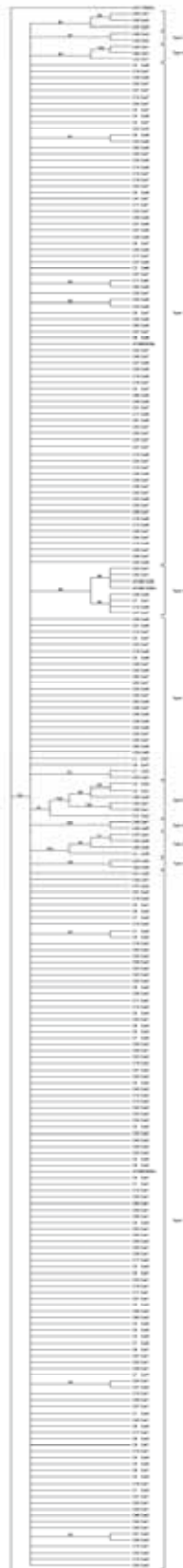


Figure 19 A pasimony cladogram of 242 clones of ITS2 region from feline *Brugia* spp. against *B. malayi*, *B. pahangi*, *B. timori* and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS2 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

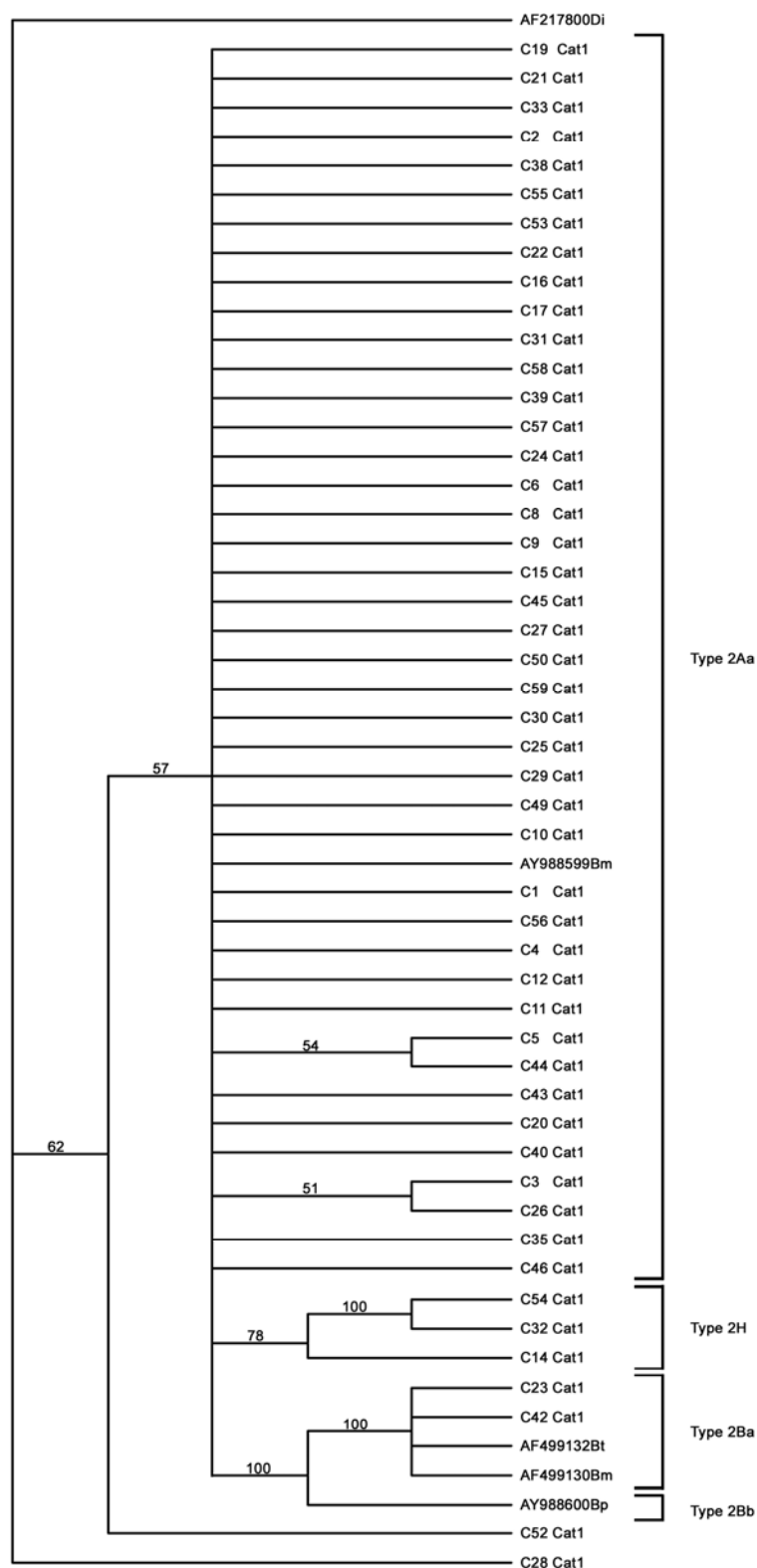


Figure 21 A pasimony cladogram of 49 clones of ITS2 region from cat1 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, *B. timori* and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS2 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

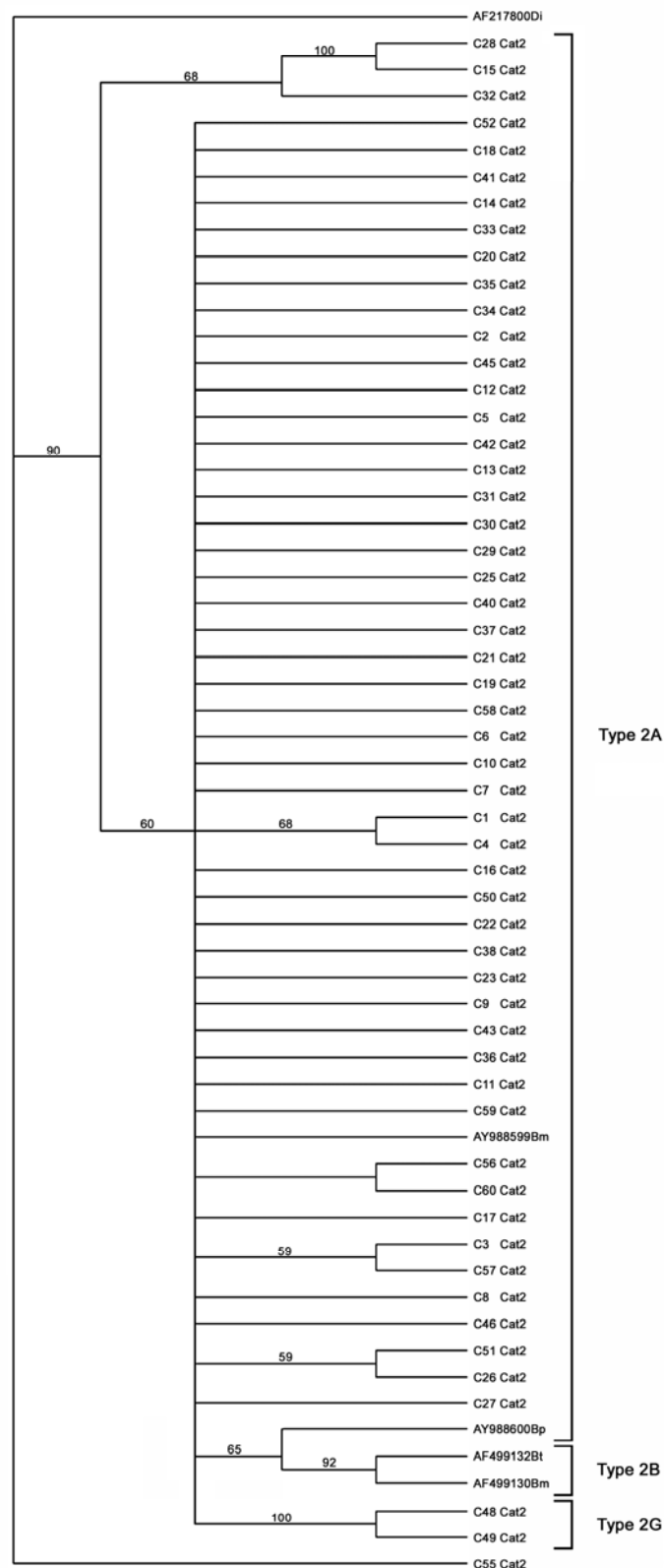


Figure 22 A pasimony cladogram of 54 clones of ITS2 region from cat2 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, *B. timori* and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS2 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

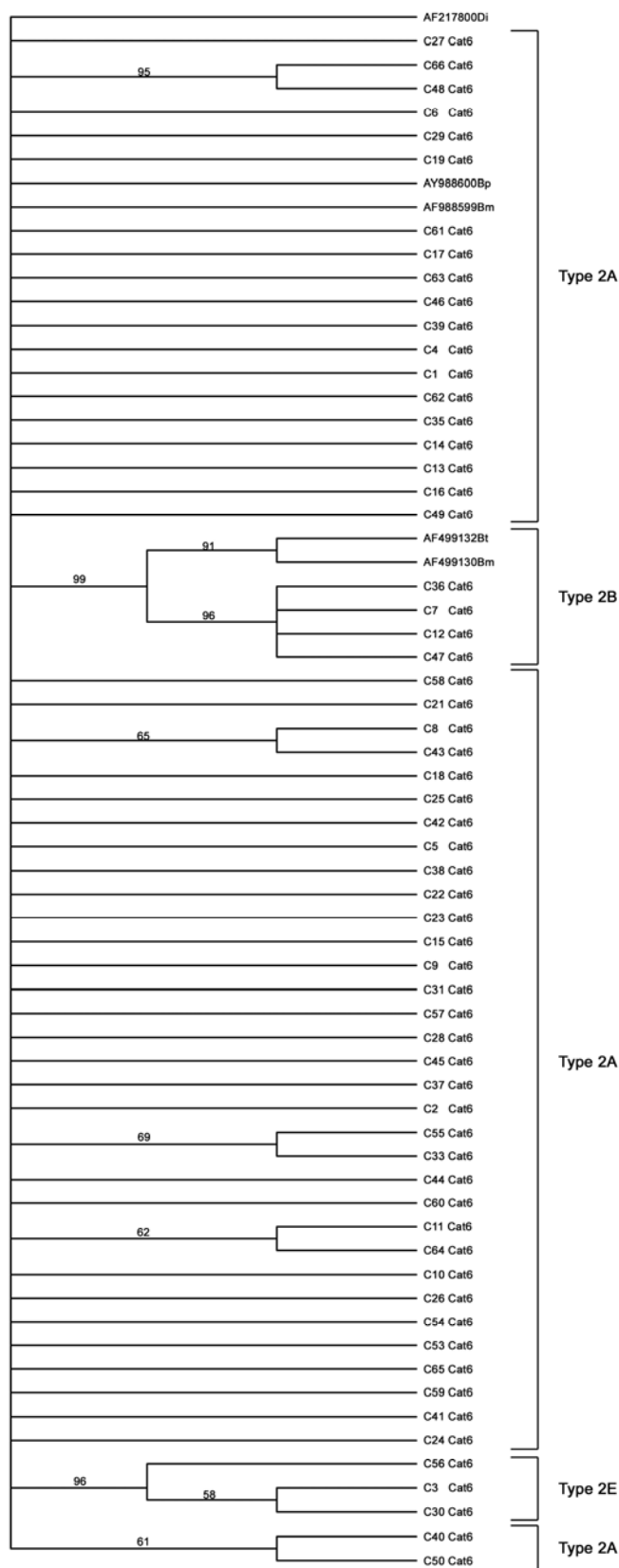


Figure 23 A pasimony cladogram of 61 clones of ITS2 region from cat6 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, *B. timori* and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS2 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

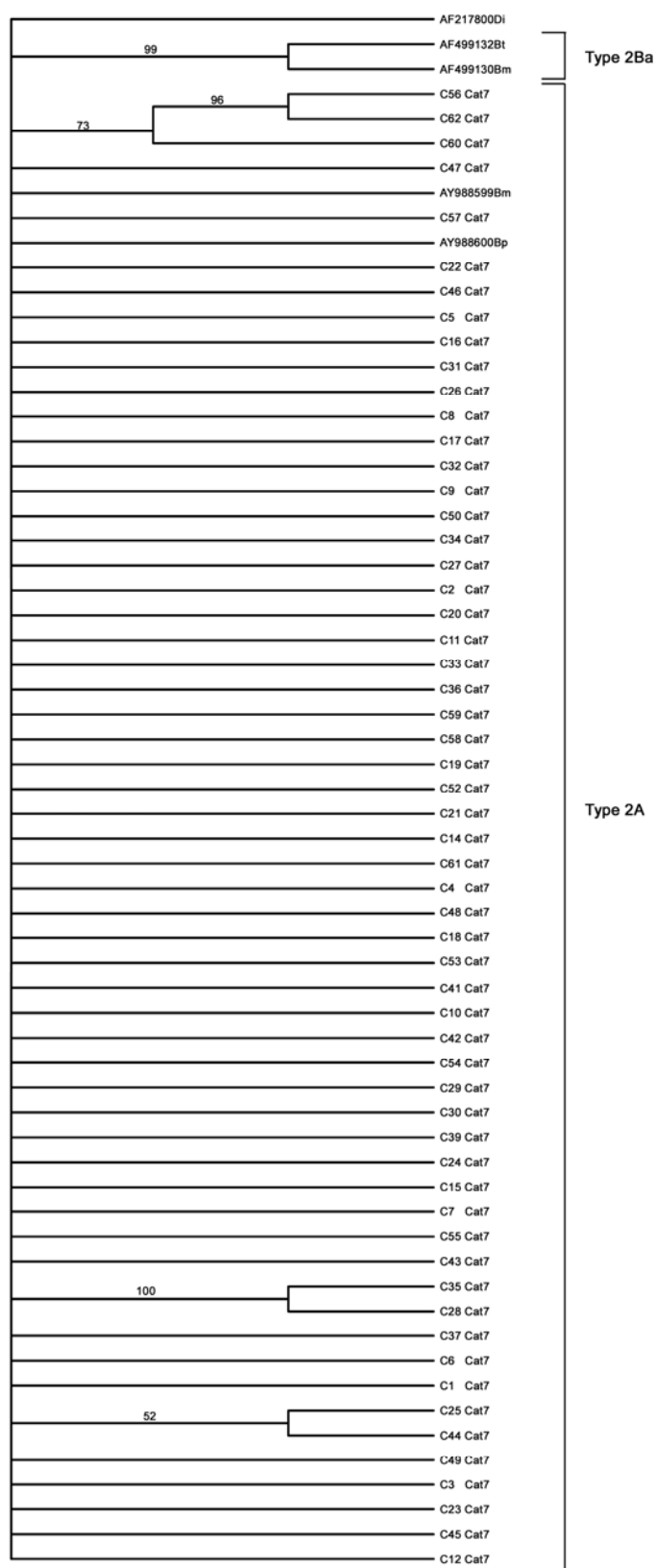


Figure 24 A pasimony cladogram of 58 clones of ITS2 region from cat7 feline *Brugia* spp. against *B. malayi*, *B. pahangi*, *B. timori* and *D. immitis* (outgroup) produced by the heuristic search of PAUP version 4.0b10 and inferred from complete ITS2 region using a bootstrap resampling of the data set. The numbers at the nodes represent the percentage of times the group occurred out of 100 trees. Branches with less than 50% bootstrap support were collapsed. No significance was placed on the lengths of the branches connecting the species.

Types of *Brugia* spp. in cat reservoirs based on parsimony trees of ITS1 and ITS2 regions was summarized in Table 19 and Table 20, respectively. Type of *Brugia* spp. based on parsimony trees of ITS1 of cat1, cat5, cat6 and cat7 was summarized in Table 21. And, type of *Brugia* spp. based on parsimony trees of ITS2 of cat1, cat2, cat6 and cat7 was summarized in Table 22.

Table 19 Summary of types of *Brugia* spp. in cat reservoirs based on parsimony trees of ITS1 and ITS2 regions.

| Cats              | Acid phosphatase staining | ITS1 (%)                            | ITS2(%)                                                                                                |
|-------------------|---------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------|
| Cat 1             | <i>B. malayi</i>          | Type 1A* (66.67)<br>Type 1C (33.33) | Type 2A*(81.63)<br>Type 2B**(4.08)<br>Type 2C(4.08)<br>Type 2D(2.04)<br>Type 2F(2.04)<br>Type 2H(4.08) |
| Cat 2             | <i>B. malayi</i>          | Type 1A(100)                        | Type 2A(92.60)<br>Type 2C(3.70)<br>Type 2G(3.70)                                                       |
| Cat 3             | <i>B. malayi</i>          | Type 1A(100)                        | Type 2A(100)                                                                                           |
| Cat 4             | <i>B. malayi</i>          | Type 1A(100)                        | Type 2A(100)                                                                                           |
| Cat 5             | <i>B. malayi</i>          | Type 1A(84.62)<br>Type 1B(15.38)    | Type 2A(100)                                                                                           |
| Cat 6             | <i>B. pahangi</i>         | Type 1A(96.83)<br>Type 1D(3.17)     | Type 2A(83.60)<br>Type 2B(6.56)<br>Type 2C(1.64)<br>Type 2E(4.92)<br>Type 2F(1.64)                     |
| Cat 7             | <i>B. pahangi</i>         | Type 1A(96.08)<br>Type 1D(3.92)     | Type 2A(94.83)<br>Type 2C(1.72)<br>Type 2E(1.72)<br>Type 2H(1.72)                                      |
| <i>B. malayi</i>  |                           | Type 1A(100)                        | Type 2A(50)<br>Type 2B(50)                                                                             |
| <i>B. pahangi</i> |                           | Type 1A(100)                        | Type 2A(100)                                                                                           |

\* Type 1A and 2A represented clone that related to ITS of *B. malayi* and *B. pahangi*

\*\* Type 2B represented clone that related to ITS of *B. malayi* and *B. timori*

Table 20 Summary of Type of *Brugia* spp. based on parsimony of ITS trees.

| ITS1    | %     | ITS2    | %     |
|---------|-------|---------|-------|
| Type 1A | 87.76 | Type 2A | 89.25 |
| Type 1B | 2.04  | Type 2B | 2.48  |
| Type 1C | 8.57  | Type 2C | 2.48  |
| Type 1D | 1.63  | Type 2D | 0.83  |
|         |       | Type 2E | 1.65  |
|         |       | Type 2F | 0.83  |
|         |       | Type 2G | 0.83  |
|         |       | Type 2H | 1.24  |

Table 21 Summary of Type of *Brugia* spp. based on parsimony trees of ITS1 of cat1, cat5, cat6 and cat7

| Cats | Species Identification<br>base on Acid<br>phosphatase staining | Number of<br>clones | ITS1 (%)                                                | Species<br>identification<br>base on ITS1<br>region |
|------|----------------------------------------------------------------|---------------------|---------------------------------------------------------|-----------------------------------------------------|
| Cat1 | <i>B. malayi</i>                                               | 63                  | Type 1Aa*(65.07)<br>Type 1C(33.33)                      | <i>B. malayi</i><br>Variant                         |
| Cat5 | <i>B. malayi</i>                                               | 39                  | Type 1Aa*(64.10)<br>Type 1Ab**(17.95)<br>Type 1B(12.82) | <i>B. malayi</i><br><i>B. pahangi</i><br>Variant    |
| Cat6 | <i>B. pahangi</i>                                              | 63                  | Type 1Ab**(95.24)<br>Type D(3.17)                       | <i>B. pahangi</i><br>Variant                        |
| Cat7 | <i>B. pahangi</i>                                              | 51                  | Type 1Ab**(96.08)<br>Type 1D(3.92)                      | <i>B. Pahangi</i><br>Variant                        |

\* Type 1Aa represented clone that related to ITS1 of *B. malayi*

\*\* Type 1Ab represented clone that related to ITS1 of *B. pahangi*

Table 22 Summary of Type of *Brugia* spp. based on parsimony trees of ITS2 of cat1, cat2, cat6 and cat7

| Cats | Species Identification<br>base on Acid<br>phosphatase staining | Number<br>of clones | ITS2 (%)                                              | Species identification<br>base on ITS1 region                                             |
|------|----------------------------------------------------------------|---------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Cat1 | <i>B. malayi</i>                                               | 49                  | Type 2Aa*(85.71)<br>Type 2Ba**(4.08)<br>Type 2H(6.12) | <i>B. malayi</i><br><i>B. malayi</i> and <i>B.timori</i><br>Variant                       |
| Cat2 | <i>B. malayi</i>                                               | 54                  | Type 2Aa*(94.44)<br>Type 2G(3.70)                     | <i>B. malayi</i><br>Variant                                                               |
| Cat6 | <i>B. pahangi</i>                                              | 61                  | Type 2A(88.53)<br>Type 2B(6.56)<br>Type 2E(4.92)      | <i>B. malayi</i> and <i>B. pahangi</i><br><i>B. malayi</i> and <i>B.timori</i><br>Variant |
| Cat7 | <i>B. pahangi</i>                                              | 58                  | Type 2A(100)                                          | <i>B. malayi</i> and <i>B. pahangi</i>                                                    |

\* Type 2Aa represented clone that related to ITS2 of *B. malayi*

\*\* Type 2Ba represented clone that related to ITS2 of *B. malayi* and *B.timori*

## CHAPTER 5

### DISCUSSION

This study has used molecular phylogenetic analysis as a tool to explore the genetic diversity of internal transcribed spacers region (ITSs) in seven cats reservoirs from the Brugian endemic area. Cats 1-5 were collected from the *B. malayi* endemic area, Narathiwat, Thailand. Cats 6-7 were collected from the *B. pahangi* non-endemic area (Lad Krabang, Thailand), where it has been previously reported to have *B. pahangi*.

The molecular techniques such as PCR-based techniques, <sup>(143-147)</sup> have been used in filarial parasite detection and differentiation. The PCR-RFLP of ITS1 region could distinguish human *B. malayi* from feline *B. pahangi*. <sup>(140, 148)</sup> Nevertheless, PCR-based and PCR-RFLP of the genes mentioned above could not illustrate the genetic diversity of *Brugia* spp. within specific host. In 2006, Phasuk and coworkers revealed that the nucleotide sequences of ITS regions were sufficient for discrimination of *B. malayi* and *B. pahangi* not only in single species infected cat reservoirs but also in the concomitance ones. Despite the ITS1 and ITS2 nucleotide sequences are informative for studying on genetic diversity of *Brugia* spp., <sup>(8)</sup> there is no report of ITSs region that can be used for investigation of genetic diversity within *Brugia* spp.

The phylogenetic relationship of *Brugia* spp. based on ITS1 and ITS2 regions of 7 cats from endemic areas in Thailand were compared to those of *B. malayi*, *B. pahangi* and *D. immitis* that have been reported in GenBank. The cladogram of ITS1 and ITS2 regions exhibited the variation of nucleotide sequences and were enable to show the relationship among 235 and 242 clones obtained from cat reservoirs, respectively. Phylogenetic tree construction based on ITS1 and ITS2 nucleotide sequences was analyzed by using the methods of DNA Parsimony (DNA PARS) and revealed that 4 types (Type 1A, Type 1B, Type 1C and Type 1D ) and 8 types (Type 2A, 2B, 2C, 2D, 2E, 2F, 2G and 2H) of ITS1 and ITS2 were observed, respectively. Among them, Type 1A and 2A were the most commonly found in all 7 cat reservoirs (87.76% and 88.98%) Type 1A was basically divided into 2 subtypes, Type 1Aa and Type 1Ab were which shown to be closely related to *B. malayi* and *B. pahangi*, respectively. The data of Type 1B, 1C and 1D have not been reported elsewhere and were shown to diverse from Type 1A. Type 1B, 1C and 1D seemed

to be the new variant of hybrid between *B. malayi* and *B. pahangi* which were found in cat 5, cat 1, and cat 6-7, respectively. However, the data implied that the common type 1A, was not sufficient for differentiation of *B. malayi* and *B. pahangi*. Nevertheless, the individual analysis of ITS1 cat reservoir clearly showed the demonstrated that *B. malayi* was identified in cat 1 whereas *B. pahangi* was existed in cat6 and cat7. Cat 5 seemed to have mixed Types of *B. malayi* and *B. pahangi*. This may be due to the less number of analyzed clones in each individual cat reservoir less showed the significantly different in comparison to *B. malayi* and *B. pahangi* retrieved from Genbank. When more clones were analyzed such as in the case of ITS1 from *Brugia* spp. of cat 1-7, the different in nucleotides bases seemed to be scattered which will minimize the ability of the tree analysis. On the other words, the 235 clones of ITS1 were closely related to each other including *B. malayi* and *B. pahangi* from Genbank.

Similarly, referring to ITS2 regions none of them were not enable to be used for discrimination of *B. malayi* and *B. pahangi*. Among 8 types, Type 2B(6/242), 2C(6/242), 2D(2/242), 2E(4/242), 2F(2/242), 2G(2/242) and 2H(3/242) have been shown to diverse from Type 2A(216/242) and they shared only 10.34% of all investigated clones. According to the ITS tree these types were likely to the hybrid between *B. malayi* and *B. pahangi* or new variant of *Brugia* spp. with 10.34% of distribution. To confirm this hypothesis, further investigation such as adult worms biopsy and their electron microscope data could be accessed. Referring to ITS2 trees of *Brugia* spp. from each individual cat reservoirs (Table 22). The data revealed that ITS2 was less informative for discrimination of *Brugia* spp. than ITS1. Hence, the ITS2 tree could not differentiate *Brugia* spp. in cat 6 and 7

In conclusion, it can be proposed that ITS regions could be used for investigation of genetic diversity *Brugia* spp. in cat reservoirs which were beneficial for not only classification of these nematodes related to the drug design but also useful for studying the dynamic of these parasites, epidemiological study, control, and eradication of lymphatic filarial in endemic area.

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## **APPENDICES**

## APPENDICES

### Materials

|                                                   |                                                                         |                   |
|---------------------------------------------------|-------------------------------------------------------------------------|-------------------|
| Absolute Ethanol                                  |                                                                         | Merck             |
| Acetone                                           |                                                                         | Sigma             |
| Agarose                                           |                                                                         | Seakem            |
| Bacto agar                                        |                                                                         | GibcoBRL          |
| Bacto <sup>TM</sup> peptone                       |                                                                         | BDH               |
| Boric acid                                        |                                                                         | Merck             |
| Deep-frozen tube                                  |                                                                         | Nunc              |
| DE 52 DEAE cellulose                              |                                                                         | Whatman           |
| Deoxynucleotide triphosphates (dNTPs)             |                                                                         | Gibco BRL         |
| 100 bp DNA Ladder                                 |                                                                         | Gibco BRL         |
| EDTA.Na <sub>2</sub> .2H <sub>2</sub> O Ultrapure |                                                                         | BSU               |
| Glucose                                           |                                                                         | BDH               |
| Glycerol                                          |                                                                         | Sigma             |
| Heparin                                           |                                                                         | Leo               |
| Hydrochloric acid                                 | HCl                                                                     | Merck             |
| Isoamyl alcohol                                   |                                                                         | Carlo erba        |
| Kanamycin                                         |                                                                         | Sigma             |
| Lambda DNA – <i>HindIII</i> Marker                |                                                                         | Promega           |
| Magnesium Chloride                                | MgCl <sub>2</sub>                                                       | Gibco BRL         |
| Naphthol AS-TR phosphate                          |                                                                         | Sigma             |
| Pararosaniline hydrochloride                      |                                                                         | Sigma             |
| 10x PCR Buffer                                    |                                                                         | Gibco BRL         |
| Phenol                                            |                                                                         | Ultrapure         |
| Phenol/Chloroform/Isoamyl alcohol. PH 7.8         |                                                                         | Research organics |
| Phosphoric acid                                   | H <sub>3</sub> PO <sub>4</sub>                                          | Merck             |
| Proteinase K                                      |                                                                         | BRL               |
| SDS (Sodium dodecyl sulfate)                      |                                                                         | Sigma             |
| Sodium chloride                                   | NaCl                                                                    | Merck             |
| Sodium di hydrogen phosphate                      | (2H <sub>2</sub> O) NaH <sub>2</sub> PO <sub>4</sub> .2H <sub>2</sub> O | Univar            |
| Sodium hydrogen phosphate                         | Na <sub>2</sub> HPO <sub>4</sub> .H <sub>2</sub> O                      | Merck             |
| <i>Thermus aquaticus</i> (Taq) DNA polymerase     |                                                                         | Gibco BRL         |

|                            |           |
|----------------------------|-----------|
| Tris (Tris(hydroxymethyl)) | Serva     |
| Tris-acetate EDTA buffer   | Sigma     |
| Yeast extract              | Gibco BRL |

## Reagent

### 1. Phosphate buffered saline (PBS buffer)

|                                                     |         |
|-----------------------------------------------------|---------|
| NaCl                                                | 8 g     |
| KCl                                                 | 0.2 g   |
| Na <sub>2</sub> HPO <sub>4</sub>                    | 1.44 g  |
| KH <sub>2</sub> PO <sub>4</sub>                     | 0.24 g  |
| H <sub>2</sub> O (distilled water)                  | 800 ml  |
| Adjust pH 7.4 with HCl                              |         |
| H <sub>2</sub> O (distilled water) adjust volume to | 1000 ml |

### 2. LB broth

|                                                     |         |
|-----------------------------------------------------|---------|
| Bacto <sup>TM</sup> peptone                         | 10 g    |
| Yeast extract                                       | 5 g     |
| NaCl                                                | 10 g    |
| H <sub>2</sub> O (distilled water) adjust volume to | 1000 ml |

### 3. LB-ampicillin agar plate

|                                    |           |
|------------------------------------|-----------|
| Bacto <sup>TM</sup> peptone        | 10 g      |
| Yeast extract                      | 5 g       |
| NaCl                               | 10 g      |
| Agar                               | 15 g      |
| H <sub>2</sub> O (distilled water) | 1000 ml   |
| Ampicillin                         | 100 µg/ml |

### 4. IPTG 200 mg/ml

|                                                          |      |
|----------------------------------------------------------|------|
| IPTG (Isopropyl-β-D-thiogalactopyranoside, dioxane free) | 1 g  |
| H <sub>2</sub> O (distilled water) (sterile)             | 5 ml |

### 5. X-Gal 20 mg/ml

|                                                          |        |
|----------------------------------------------------------|--------|
| X-Gal (5-bromo-4-chloro-3-indolyl-β-D-galactopyranoside) | 100 mg |
| N, N-dimethylformamide                                   | 5 ml   |

Table 6 Nucleotide sequence data of 235 clones of *Brugia* spp. ITS1 region from cat reservoirs.

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1 Cat1 | <p>AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br/> TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br/> ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br/> GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br/> TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTAC<br/> CAACAAAAAAAAAAAAAAAAAAAAACCTTACACAAATTATATATATTATAGTAATAAAT<br/> TTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT</p>                        |
| C2 Cat1 | <p>AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br/> TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br/> ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br/> GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br/> ATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br/> AACGCAGCT</p> |
| C3 Cat1 | <p>AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br/> TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br/> ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br/> GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTA<br/> ATAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br/> AAGAACGCAGCT</p> |
| C4 Cat1 | <p>AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br/> TTGGTGACTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br/> ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br/> GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br/> TAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br/> CGCGGCT</p>  |
| C5 Cat1 | <p>AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br/> TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br/> ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br/> GCTACCAACAAAAAAAAAAAAAAAAAAGACTTACAAAAAAATTATATATATATTATAG<br/> TAATAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br/> TGAAGAACGCAGCT</p> |

Table 6 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C6 Cat1  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GGACGCAGCT |
| C7 Cat1  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATAGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAATTTTTTCTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT |
| C8 Cat1  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| C9 Cat1  | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATAATAAT<br>AAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT     |
| C10 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTCCCACCAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATTATAGTAAT<br>AATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT  |

Table 6 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C11 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATAGCTACCATATATATATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAACTTTAA<br>TATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT          |
| C12 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAGCCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATAAAT<br>TTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                         |
| C13 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAACAATATGAGTAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAGTTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT      |
| C15 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTCCCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTCCCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTCCCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT      |
| C16 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGGACTTAATAAGCATTTATGCTAGATA<br>TGCTACCAACAAAAAAAAAAAAAAAAAGAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAATTTTTTTTTAACTCTTAGCGGGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |

Table 6 (continued)

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| C17 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT       |
| C18 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>GTAATAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT |
| C19 Cat1 | AAAAAATAACACACCAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAATAATAATAGTAATAATATGAATAAACGGGGATATTTGTTGGG<br>GTGTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTCC<br>CCCCAAAAAGAAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAAT<br>AAATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                         |
| C20 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACACATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTCC<br>CAACAAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATA<br>AATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                               |
| C21 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT       |

Table 6 (continued)

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| C22 Cat1 | <p>AATCAATAACACAACCACGACTGAGTTTGTGTTTTATTATAGCTACCGCATCCATATATAT<br/> TATGATACTGTATTAACAACATCTTGTTGTAGGTGTTAGTAATAGATAGAGGTTGATAAT<br/> TTTAATTTGGTAGTGGCAGAAGCAATAATAATAATAATATGAATAAGCGGTGATGTT<br/> GGTTGGTGTGCTGATACTTTATCCAAGTTCTCGCCTTCCCGTCGCTATCAATGACGATAAAG<br/> CGAAAGCTTAATTAATTTTACCTTTTACTTAAGTAGACTTAATAAGCATTTACGCTAGAT<br/> ATGGTTCCACCAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAG<br/> TAATAATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br/> TGAAGAACGCAGCT</p>    |
| C23 Cat1 | <p>AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br/> TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br/> ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br/> GTCTATACTTTCTCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br/> TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTAC<br/> CAACAAAAAAAAAATAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATA<br/> AATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT</p>                     |
| C24 Cat1 | <p>AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br/> TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br/> ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br/> GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br/> TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTAC<br/> CAACAAAAAAAAAAAAAAAAAAAAAAAAACATACCCAAATTATATATATTATAGTAATAAATT<br/> TTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAAAACGCAGCT</p>                         |
| C25 Cat1 | <p>AAAAAATAACACACCAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br/> TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br/> ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br/> GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br/> ATAATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br/> AAGAACGCAGCT</p> |
| C27 Cat1 | <p>AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATA<br/> TTATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAA<br/> TTTTAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br/> TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br/> GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br/> TATGCTACCAACAAAAAAGAAAAAAGACATACAAAAAATTATATATATATTATAGT<br/> AATAATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br/> GAAGAACGCAGCT</p>      |

Table 6 (continued)

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| C28 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTGTATATATATTATAGTA<br>ATAATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C29 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATAATTT<br>TTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                     |
| C30 Cat1 | AAAAAATAACACACCACAGAGTGAGTGATTTATTTCTATTACTATAGCTCCCCATTATA<br>TTATGATACTATATTAACACCACATTGTGGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTGGTGGCTTAAATAATAATAGTAATAATATGAATAAACGGGGATATTTGTTGGG<br>GTGTATACTTTATCCAAGTTATCGCCTAACCGTGGATAACAAAGAAGATAAAGCGATAGC<br>TTAATTAATTTTTTCATTTAATTAAGTGGAGTTAATAAGCACTTATGCTAGATATGCTCC<br>CCCCAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATAA<br>ATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                      |
| C31 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAGGACATACAAAAAATTATATATATATTATAGCAATAA<br>TAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT    |
| C32 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATTAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT    |

Table 6 (continued)

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| C33 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATGTATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAATAAT<br>AAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCG<br>GCT   |
| C34 Cat1 | AAAAAATAACACACCAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCGGCT  |
| C35 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATAT<br>TATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAAT<br>TTAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATT<br>CGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAG<br>CGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGAT<br>ATGCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT |
| C36 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT  |
| C37 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT  |

Table 6 (continued)

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| C38 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATAAT<br>AATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT |
| C39 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATAGCTACCATATATATATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATAATAA<br>TAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>GGCT     |
| C40 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATCTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| C41 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATAGCTACCATATATATATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAATAATAATAATAATAGTAATATGAATAAACGGTGATATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATAAT<br>AAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT     |
| C42 Cat1 | AAAAAATAACCCAGCAATGATTGATTGATTTATTACTATTAGTAGGGGTACCGTATTATA<br>TTATGGTACGATATTAGCAACATATTGTGGTGAGGTGTGTTACCCTAATAGATTGATTTT<br>AATAGGGTAGTAGCTTAAATAATAATAGTAATAATAGGAATAAACGGTGGTATTGTGTGG<br>TTTTTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAG<br>CTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAGGCTA<br>CCAACAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATAATAA<br>TTTTTAACTCTTAGCGGGGATCACTTGGCTCATGGATGGAGGAAGAACGCAGCT                       |

Table 6 (continued)

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| C43 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT |
| C44 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| C45 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAGTTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |
| C46 Cat1 | AAAAAATAACACACCAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTATCAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C47 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |

Table 6 (continued)

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| C48 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAAAAAAAAAAAAACATACCCAAATTATATATATTATAGTAATAA<br>ATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAAAACGCAGCT                     |
| C49 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT  |
| C50 Cat1 | AAAAAATAACCCACCAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGGGCGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATAGGCTCC<br>CAACAAAAAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATAA<br>ATTTTAACTCTTAGCGGGGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                     |
| C51 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCGTT<br>GGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGAT<br>AGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGC<br>TACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAATA<br>AAAATTTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCA<br>GCT      |
| C52 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT |

Table 6 (continued)

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| C53 Cat1 | AAAAAATAACCCACCAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTAGCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATCTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCTCC<br>CAACAAAAAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAATAA<br>ATTTTAACTCTCAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                   |
| C54 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C55 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATTATG<br>ATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTA<br>ATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTT<br>GGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGAT<br>AGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGC<br>TACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT   |
| C56 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C57 Cat1 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT  |

Table 6 (continued)

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| C61 Cat1 | AAAAAATAACCCAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTGGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATAGGAATAAACGGTGATATTCGTGGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCTCC<br>CACCAAAAAAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAAT<br>AAATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                          |
| C62 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAAAAAAAAAAAAACATACCCAAATTATATATATTATAGTAATA<br>AATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAAAACGCAGCT                           |
| C63 Cat1 | AAAAAATAACACACCAATGATTGATTGATTTATTACTATTACTATAGCTCCCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCTCC<br>CACCAAAAAAAAAAAAAAAAAAAAAAAAAACATACACAAATTATATATATTATAGTAAT<br>AAATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                          |
| C64 Cat1 | AAAAAATAACACCGGCAATGATTGTATTGATTTAATACTATTACCTCCTCCGAACATAGG<br>GTAATAATGACAACCCTCTTCCCGATCAGTTTGGCTGTATGGGTTTTTACCCCTAATAGA<br>TTGATTTGGAATCTGGGAGGAGCTTTAATTATTTTAGTTATAATATGCAAAACCCGGGAT<br>TATCGTTGGTGGCTAAACTTTATCCAAGTTTTACCCTATCGCCATTATAAATGGAGAA<br>AAAGCCAAGCTTAAATCACTTTTAACCATGGAATTAGTAAACCACAAAAAGGCTTTTTGC<br>TGCACATTGGTCCCAACCTGAGGGCAATTATCTTTAAAAAGAAGTCGTGCCCCCCTTTC<br>AAGTCATATTTGCGCTAAAAATTTTTTGACCTTACCGGGGGGATCCCCTGGGGCCTGGG<br>GCCTTTTAAAAAACTGATCAAT |
| C65 Cat1 | AAAAAATACCCCACCAGGGGTGGATTGATTTTTTATTATTCCTATAGCTCCCATATTATT<br>TAGGATCCTATATTACCACCATATTGTGGTAGGTGTGTTCCCTAAAAGATGGATTTTA<br>ATAGGGTAGTGGCTTAAATAATAATGGTATTAATAGGATTAACCGGGGATTTTGGTGGGT<br>GTTTATATTTTATCCAAGTTATCGCTTACCGTGGATAACAATGAAGATAAAGCGAGAGC<br>TTAATTAATTTTATCATTTAATTAGGTAGACTTAATAAGCTTTTATGCTAGATATGCTCC<br>CACCAAAAAAAAAAAAAAAAAAAAAAGCCTGCCCAAATTATATATATTATAGTAATAAAA<br>TTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                               |

Table 6 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| C66 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCTAC<br>CCACAAAAAAAAAAAAAAAAAAAAAAAAAACCTACCCAAATTATATATATTATAGTAATA<br>AATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAAAACGCAGCT                   |
| C67 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCTAC<br>CAACTAAAAAAAAAAAAAAAAAAAAAAAAACCCTCCCCAATTATATATATTATAGTAATAAA<br>TTTTTAACTCTTAACGGTGGATCACTTGGCTCATGGATCGATGAAAAACGCACCT                  |
| C68 Cat1 | AAAAAATAACACAACAATGATTGATTGATTTATTACTATTACTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTGTTACCCTAATAGATTGATTTTA<br>ATATGGTAGTAGCTTAAATAATAATAGTAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAAAAAAAAAAAAACCTTACCCAAATTATATATATTATAGTAATA<br>AATTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAAAACGCAGCT                   |
| C1 Cat2  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |
| C2 Cat2  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |

Table 6 (continued)

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| C3 Cat2 | AAAAAATAACACAACAGTGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C4 Cat2 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT |
| C5 Cat2 | AAAAAATACCCACCAATGATTGAATTTATTATTATTATAGCTCCCATATATATATATTA<br>TGATACTATATTAACAACATATTGTGGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTGGCATAAATAATAATAATAATAATAATATGAATAACCGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATACCAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTCCCACCAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| C6 Cat2 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT |
| C7 Cat2 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTCCCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |

Table 6 (continued)

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| C1 Cat3 | AAAAAATAGCACACAACGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT     |
| C2 Cat3 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAACAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGGTAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT    |
| C3 Cat3 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATAT<br>TATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAAT<br>TTAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATT<br>CGTCGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAG<br>CGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGAT<br>ATGCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATATTATAGT<br>AATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT |
| C4 Cat3 | AAAAAATAACACAACAATGATTGAATTTATTATTATAATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAGTAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATGAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>TAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT  |
| C5 Cat3 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGTAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT  |

Table 6 (continued)

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| C6 Cat3 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATGTATTAT<br>GATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTT<br>AATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCGT<br>TGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGA<br>TAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATG<br>CTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATAA<br>TAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT  |
| C7 Cat3 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGGCTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAAGTTATATATATATTATAGTA<br>ATAATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C1 Cat4 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAGGCATACAAAAAATTATATATATATTATAGTAATAAT<br>AATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT  |
| C2 Cat4 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATAATA<br>TAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT     |
| C3 Cat4 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATACATATTATAGTA<br>ATAATAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT  |

Table 6 (continued)

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| C4 Cat4 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT                  |
| C5 Cat4 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTGTTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT                 |
| C1 Cat5 | ACTCTATAAACCACGATGATTGAATTTATTATTATTATAGCTACCATATCTATATATTAT<br>GATACTATATTAACAACATAGTGTTGTATGTGTTATTAATAGATTGATGTTATCATTTTA<br>TATGGTAGTAGCATAAATAATAATAATAATAATAATAATATGAATAAACGGTGATCTTCG<br>TTGGTGTCTATACTTTATCCAAGTTATAGCCTAACCGACGATAAAAAATGAAGATAAAGCA<br>ATAGCTTAATTAATTATACCATTTACTTAATTAGACTTCACAACCATTTATGCAAGATCT<br>CCTACCTACCAATAAAAAATAAAAGACACTTCCGATAAAATTATATACATATTATACTGT<br>TAGTAATAAAAAATTTTTTTTAACTCCTAGCCGCGGATCTCTTGGCTCATGGACCGCTGA<br>ATAACACATCT            |
| C2 Cat5 | AGAAAGTAACAGAGAATGATATGCCTTATGTCCATATGCTTTTCATCAGAAATGATACTG<br>AGTAGGATTTATCAAATGCAGATGAAAATTTTTGTTGGAGAAGGAAATGAAAACTCATAT<br>GGCATTTTTGCACAATTCAGGGTGTATAGTCAAAGTCCAAAGGAAAGTTCCTTTATTGGC<br>ACTTGAAAAATGCAGATTTACATTTGAACCTTGGCTATAACTCACTTGGAGAAGCTTGCAT<br>TGCCTTATAAGTGTGGAATAGATTTGGTGGTCCGGAATAGTTGATTTAGAGTCTCAAAT<br>GATTTAATTCCAACCTTGATGTCTCAAAAAATCCGATAGATGGGACCGCAGAGACCTCCCC<br>ATGTTTAACACACAATGGCCTTTTGTTCAGTCCCCTACCAAGAAAGTCTCTGAAAATAAA<br>TGTTTGCTACAGGCTCCTAATA |
| C4 Cat5 | GCTAAAATACACACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTAT<br>GATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTT<br>AATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGA<br>TAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATG<br>CTACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT                   |

Table 6 (continued)

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| C5 Cat5  | GCTAAAATACAAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTAT<br>GATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTT<br>AATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCGT<br>TGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGA<br>TAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATG<br>CTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT          |
| C7 Cat5  | GCTAAAATACAAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTAT<br>GATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTT<br>AATATGGTAGTAGCATAAATAATAATAATAATAATAATAATATGAATAAACGGTGATATT<br>CGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAG<br>CGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGAT<br>ATGCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAG<br>TAATAATAATAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT       |
| C9 Cat5  | GCTAAATACCAACATGATTGAATTTATTATTATTATAGCTACCATATATATATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAATAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAATTTTTTTTTTAACCTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT       |
| C10 Cat5 | AGAAAGTAACAGAGAATGATATGCCTTATGTCCATATGCTTTTCATCAGAAATGATACTG<br>AGTAGGATTTATCAAATGCAGATGAAAATTTTTGTTGGAGAAGGAAATGAAAACTCATAT<br>GGCATTTTTGCACAATTCAGGGTGATAGTCAAAGTCCAAAGGAAAGTTCTTTTATTGGC<br>ACTTGAAAAATGCAGATTTACATTTGAACTCGGCTATAACTCACTTGGAGAAGTTGCTAT<br>TGACTGATAAGTGTGGAATAGATTTTGTGGTCTGGAAATAGTTGATTTAGAGTCTCAAAT<br>GATTTAATTCCAACCTGATGTCTAAAAAACTCAGATAGATGGGACCGCAGAGACCTCCCC<br>ATGTTTAACACACAATGGCCTTTTGTTCAGTCCCCTACCAAGAAAGTCTCTGAAAATAAA<br>TGTTTGCTACAGGCTCCTATTA |
| C12 Cat5 | GCTAAATACACACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTATG<br>ATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTA<br>ATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCGTT<br>GGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAGGATAAAGCGAT<br>AGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGC<br>TACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAAATTATATATATATTATAGTAAT<br>ATAATAAAAATTTTTTTTTTAACCTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT          |

Table 6 (continued)

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| C17 Cat5 | CTAAAAATACACACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATAT<br>TATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAAT<br>TTTAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATT<br>CGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAG<br>CGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGAT<br>ATGCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT     |
| C20 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATAATATGAATAAACGGTGA<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTA<br>TAGTAATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT    |
| C22 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAATAA<br>AAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAG<br>CT             |
| C26 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTTGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAGAAATTATATATATATTATAGTAATAA<br>ATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTCGGCTCATGGATCGATGAAGAAC<br>GCAGCT         |
| C28 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAA<br>TTTTAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAGACTTCCACATACACTCCACACACACCTCAGGGG<br>TATGACAGAGAGAGGTTTCATACTTTTGGTGTGAGGTTCAGCAGAGCTCATCAAGACA<br>AGTAGACAAGGGAAGC |

Table 6 (continued)

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| C32 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAG<br>TAATAATAATAAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT |
| C33 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAGATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAATTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT  |
| C34 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATTATG<br>ATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTA<br>ATATGGTAGTAGCATAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTCTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGAAATGCTAC<br>CAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACAAT<br>AAAACTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAG<br>CT             |
| C35 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATAATTATTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAA<br>TTTTAATATGGTAGCAGCATAAGTAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAATTTCTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT   |
| C36 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAGTAATAATAATAATATGAATAAACGGTGTTATTCGTTGGTG<br>TCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATAGCT<br>TAATTAATTTTATCATTTAATTAAGTAGACTTAATAAACATTTATGCTAGATATGCTACC<br>AACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACAATAAA<br>ATTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAGCT                  |

Table 6 (continued)

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| C37 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTTTTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT  |
| C38 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCCACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTAAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT       |
| C39 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATAT<br>TATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAAT<br>TTAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGAT<br>ATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATA<br>AAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTA<br>GATATGCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATA<br>GTAATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT |
| C40 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATTATG<br>ATACCATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTA<br>ATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTGGT<br>GTCTATACTTTATCCAAGTTATCGCCCAACCGTCGATAACAATGAAGATAAAGCGATAGC<br>TTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCTAC<br>CAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAATAAT<br>AAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT        |
| C43 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGCAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTCTATCATTAAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT         |

Table 6 (continued)

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| C46 Cat5 | AAAAAATAACACAACAATGACTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACAAT<br>AAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAG<br>CT                |
| C49 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCACATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCCAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAATTTTTTTTTAACTCTTAGCGGTGGATCTCTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT        |
| C50 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATATTA<br>TGATACCATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT        |
| C51 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTGGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT    |
| C53 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATATAT<br>TATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAAT<br>TTTAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATT<br>CGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAG<br>CGATAGCTTAACCTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGAT<br>ATGCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAATTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |

Table 6 (continued)

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| C55 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT  |
| C56 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATAT<br>TATGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAAT<br>TTAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGT<br>TGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAACGAAGATAAAGCGA<br>TAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATG<br>CTACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGTCTTATGGATCGATGAAGA<br>ACGCAGCT   |
| C57 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C58 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |
| C60 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAATAA<br>TAATAAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCGGCT |

Table 6 (continued)

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| C61 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATAA<br>TAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT        |
| C62 Cat5 | AAAAAATAACACAACAATGGTTGAATTTATTATTATTATTATAGCTACCATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATA<br>ATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT       |
| C63 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAGATTATATATATTATAGT<br>AATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT   |
| C64 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTACGCTAGATAT<br>GCTACCAACAAGAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTA<br>ATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT |
| C65 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTGATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT    |

Table 6 (continued)

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| C66 Cat5 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT     |
| C1 Cat6  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATTATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGTAGCTTGATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT  |
| C2 Cat   | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATATATATATTATAGT<br>AATAACAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| C3 Cat6  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATTAATAATCTGAGTTATTCGTGG<br>GAGTCTATGCTTTATCCAATTTATCCCCTAACCTCCATAACAATGAAAAATAAAGCGAAA<br>GCTTAGTTAATTTAATCATTTATTTAATTAACATAAATAAATTTTATGCTATATATGCT<br>ACCTATGCTACCAACAAAAAAAAAAAAACATACAAAAACATTTATACATATTTTATATTAAC<br>AATAATATTTTTTTTATTTCTTATCGCTGGATCACTTGGATCATGTATCTATGAAAAACA<br>CAACT       |
| C4 Cat6  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATA<br>ACAATAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT    |

Table 6 (continued)

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| C6 Cat6  | AAAAACAACGCATCAATGATTGAATTTATTATTATTATCATAGCTACCATATTATATTA<br>TGATACCATCTTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATAGGGTAGTAGCATAAGTAATAATAATAAATTTGAATAAACGGGGTTTTTGTG<br>GGGTTTATACTTTATCCAAGTTATTGCCTAACCGTCGATAACCATGAAGATAAAGGGATA<br>GCTTAATTAATTTTTCCCTTTAATTAAGTAGACTTAATAAGCCTTTATGCTAGATATGCT<br>TCCCACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATTATAGTA<br>ATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAG<br>AACGCAGCT            |
| C7 Cat6  | AAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT |
| C8 Cat6  | AAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT     |
| C9 Cat6  | AAAAATAACACACCAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATA<br>TTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br>TGGATGAAGAACGCAGCT |
| C10 Cat6 | AAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGGTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTGGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GGGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAGGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGGGGGGATCACTGGGCTCAGGGATGGAGGAAGAACGCA<br>GCT      |

Table 6 (continued)

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| C11 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATA<br>TATATTATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCAT<br>GGATCGATGAAAAACGCAGCT |
| C12 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAACAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACAA<br>TAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAG<br>CT          |
| C13 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATTAT<br>AGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT |
| C14 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAAT<br>AACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT        |
| C15 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATTAATAATATGAGTTATCCGTGG<br>TAGTCTATGCTGTCTATACTTTATCCCTATACCGCCAAACCGTCGATAATAATGAAAAT<br>ACTTCGATAACTTAATTATTTTTATCATTTAACTAAATAAACTTTTTAGCCATTTATGCT<br>ACCTATGCTACCAACAAAAAAAAAAAAACATACAAAACATTCATACATGTTTTACATAAATA<br>ACAATAAAATCTTTTTAATTTCTTTTAACTCGAACCGTTGGATCACGTGTCTCAGGAAC<br>CATAACT        |

Table 6 (continued)

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| C16 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGAGTTATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCCATAACAATGAAAAATAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAACATTTATGCTATATATGCT<br>ACCTACGCAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATTTTATAGTA<br>ATAACAATAAAATTTTTTTTAACTCTTATCGGTGGATCACTTGGCTCATGGATCGATGAA<br>AAACGCAACT         |
| C17 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>CCCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATA<br>ACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT            |
| C18 Cat6 | AAAAAATAACCCACCATGATTGAATTTATTATTATTATTATAGCTACCCTATTATATTA<br>TGATACTATATTAACCACCTATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT             |
| C19 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACTAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT |
| C20 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTATTTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATA<br>TATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGG<br>ATCGATGAAGAACGCAGCT  |

Table 6 (continued)

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| C21 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTATGA<br>TACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTTTAA<br>TATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATTA<br>TAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT   |
| C22 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAA<br>TTTTAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT      |
| C23 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATT<br>ATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT |
| C24 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATTATAGTAA<br>TAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT    |
| C25 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTAT<br>AGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br>TGAAGAACGCAGCT |

Table 6 (continued)

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| C26 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAGCATACAAAAAGTTATACATA<br>TATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATG<br>GATCGATGAAAAACGCAGCT |
| C27 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACAAT<br>AAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAG<br>CT           |
| C28 Cat  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATA<br>TTATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT    |
| C29 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAGTTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT           |
| C30 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAAAACGCAGCT  |

Table 6 (continued)

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| C31 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACCATACAATAATGTTTTTTTTTAT<br>ATTATAAAAATAACAATTTTTTTTTTACTCTCCTAGGGATGAATCGCTTGACGCATGGA<br>TCAATAAAGAACCCAGCT |
| C32 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATA<br>GTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT      |
| C33 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTAT<br>AGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br>TGAAGAACGCAGCT      |
| C34 Cat6 | AAAAAATAACATAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATA<br>TTATGGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGGGATCACTGGGCTCAGGGA<br>TGGAGGAAGAAGGCAGCT       |
| C35 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT      |

Table 6 (continued)

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| C36 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATAT<br>ATATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCAT<br>GGATCGATGAAAAACGCAGCT |
| C37 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT   |
| C38 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATCTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATA<br>TTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br>TCGATGAAGAACGCAGCT |
| C40 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATTATAGTAAT<br>ACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT       |
| C41 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAGAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT                   |

Table 6 (continued)

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| C42 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT             |
| C43 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT             |
| C44 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT             |
| C45 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATA<br>TTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br>TCGATGAAGAACGCAGCT |
| C46 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAACTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT             |

Table 6 (continued)

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| C47 Cat6 | AAAAAATAACACAACAAGGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTCCCAACAAAAAGAAAAAAAAAAAAACATACAAAAAGTTATACATATATTA<br>TAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br>ATGAAGAACGCAGCT         |
| C48 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAGAAAAAAAAAAAAACATACAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT     |
| C49 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATAATATGAATAAAA<br>CGGTGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAAT<br>GAAGATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATT<br>TATGCTAGATATGCTACCAACAAAAAAGAAAAAAAAAAAAACATACAAAAAGTTATATATATA<br>TTATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT |
| C50 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATACTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCCAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAGAAAAAAAAAAAAACATACAAAAAGTTATATATATATTATAGTAAT<br>ACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT      |
| C51 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAGAAAAAAAAAAAAACATACAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT     |

Table 6 (continued)

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| C52 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT           |
| C53 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATT<br>ATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT     |
| C54 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATAT<br>ATTATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGG<br>ATCGATGAAGAACGCAGCT     |
| C55 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAGCGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCAATAACAATGAA<br>AATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGAATACTTAATAAGCATTAT<br>GCTAGATCTGCTACCAACAAAAAAAAAAAAAAAAAACACCCTACAAAAAGTTATATA<br>TTTATTATAGTAATAACAATAATTTTTTTAACTCTTAGCGGAGGATCTCTTGCCTCAT<br>GGATCGATGAAAAACGCAGCT |
| C56 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAAAACGCAGCT     |

Table 6 (continued)

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| C57 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATTATAG<br>TAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AAAACGCAGCT       |
| C58 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATA<br>TTATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAAAACGCAGCT     |
| C59 Cat6 | AAAAAAAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAACTACAAAAAGTTATACATATA<br>TTATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br>TCGATGAAAAACGCAGCT  |
| C61 Cat6 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAACTTACAAAAAGTTATATATA<br>TATTATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGT<br>ATCGATGAAGAACGCAGCT |
| C62 Cat6 | AAAAAATAACACAACAAAGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAACTTCAAAAAAGTTATATATATAT<br>TATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT |

Table 6 (continued)

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| C63 Cat6 | <p> AAAAAAAAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br/> TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br/> AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br/> AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAACTTACAAAAAGTTATATATAT<br/> ATTATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br/> TCGATGAAGAACGCAGCT </p>          |
| C64 Cat6 | <p> AAAAAATAACACAACAAAGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br/> TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br/> AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br/> AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATAT<br/> TATAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br/> GATGAAGAACGCAGCT </p>           |
| C65 Cat6 | <p> AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br/> TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br/> AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br/> AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTA<br/> TAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCG<br/> ATGAAGAACGCAGCT </p>          |
| C66 Cat6 | <p> AAAATATTACACATCAACGATAGAATTTTTTCATAATAAAGGCGCCGAAAAATTTACATAT<br/> GCATCCTATATTACCAACAACGGGTAGTAGGTGCCTTTAATAAATTGTCCTAATTAATTT<br/> AAATATGGTGTTAGCATAATTATTATTATCATTATTTGGGGAGATAATCGGTGTTATTGG<br/> GGGGTTTTTTAACTTTTTTCAACTGACACCTTAAATCAGTTAACCATTTAGTCAAAATC<br/> GAAAAGGTTATTTAATTTACCAATTGAATAGAGTAGATTACCAACCATTTACACCGTTT<br/> ATTCATATTATAAATATAATTACTTATGCTACTACCATATTAATTAATTAACATCAATC<br/> TATTAGTAACACATACAACAATATGTTGTTAATATAGTATCATAATATAATATGGTAGCT<br/> ATAATAATAATAATAAATTCAATC </p> |
| C1 Cat7  | <p> AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br/> TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br/> TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTATTTCGTTG<br/> GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br/> GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br/> ACCAACAAAAAAAAAAAAAAAAAGAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br/> AATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br/> CAGCT </p>                  |

Table 6 (continued)

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| C2 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTA<br>TAGTAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br>TGAAGAACGCAGCT          |
| C4 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAG<br>TAATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT          |
| C6 Cat7 | AAAAAATAACACAACAATGATTGAATTTGTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATATGCAGAGTCAG<br>TCTTAGTCGTCGATGCCTAACTTTATTCTCGTCAACCCCTCAACAACAATGACAATGAA<br>GAGAAAGCTTAATCTTATTTACCTTTTCCTTTATATACTTAACTTAATTTATGCTTAA<br>GCTGCAACCGCCACCAACAAAAAAAAAAAAAAAAAACATACACATACGTTATATTTATATTTT<br>AGTAATAACAATAACATTTTTTTTTTTTTAACTCTTAGATCTGTATCCCCTGGCTCCGGG<br>AACGATCACAACCT |
| C7 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCGTAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAG<br>TAATAACAATAAAATTTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT   |
| C8 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGATAGTAGCATAAGTAATAGTAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATA<br>GTAATAACAATAAAATTTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT   |

Table 6 (continued)

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| C9 Cat7  | AAAAAATAACACACCAATGATGGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCACCAAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATA<br>GTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT      |
| C10 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATATATA<br>TATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGG<br>ATCGATGAAGAACGCAGCT |
| C13 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACAGATA<br>TTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br>TCGATGAAAAACGCACCT    |
| C14 Cat7 | AAAAAATAACCCACCATGATTGAATTTATTATTATTATTATAGCCACCCTATTATATTA<br>TGATACTATATTAACCACCTATTGTTGTATGTGTTACCAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCCATACTTTATCCCAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATAA<br>ATAAAATTTTTTTTAACTCTTACCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT          |
| C15 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGATATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTA<br>ATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>AACGCAGCT        |

Table 6 (continued)

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| C16 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATATAT<br>ATATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATG<br>GATCGATGAAGAACGCAGCT  |
| C17 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACCACATATTGTTGTATATGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCCTAACCGTCGATAACAATGAAGATAA<br>AGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAG<br>ATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGT<br>AATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT     |
| C18 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAAAACGCAGCT     |
| C19 Cat7 | AAAAAATAACACAACAAGGATGGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATA<br>TTATGGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGGGGATCACTGGGCTCAGGGA<br>TGGAGGAAGGAAGGCAGCT |
| C20 Cat7 | AAAAAATAACACAACAAGGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGA<br>TATGCTACCACCAAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT     |

Table 6 (continued)

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| C21 Cat7 | AAAAAATAACACAACAAAGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT         |
| C22 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGTAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGA<br>TATGCTCCCAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATA<br>GTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT       |
| C23 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTGTTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT         |
| C25 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGC<br>AGCT         |
| C26 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGTAGCTTAATTAATTTTACCGTTTAAATTAAGTAGACTTAATAAGCATTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAACATACAAAAAGTTATAT<br>ATATATTATAGTAATAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCA<br>TGGATCGATGAAGAACGCAGCT |

Table 6 (continued)

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| C27 Cat7 | AAAAAATAACACAACAAGGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTAT<br>TCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAA<br>GCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGA<br>TATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT    |
| C28 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTCAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATA<br>TTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGA<br>TCGATGAAGAACGCAGCT |
| C29 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT       |
| C30 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAGGCATTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATAT<br>ATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGG<br>ATCGATGAAAAACGCAGCT |
| C31 Cat7 | AAAAAATAACTCAGCAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACACCATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAAAAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATGCTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTATGCTAGATATGCT<br>NCCACCAAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT      |

Table 6 (continued)

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| C32 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAACAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT                 |
| C33 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATATATATATTATAGT<br>AATAACAATAAAATTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT              |
| C34 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGATGAATCAGCGT<br>TGTTCTTCGGTGGCGACTCTTCATCATCCTAATCATCTACCCGCCGACAATAATGATGAA<br>AATAAGACAACCTATTTATTTTTTCCACTTTTTTAATAAGACTACTTAATAATTTTTGCT<br>GCAAAAGCTGCCACCAACAAAAAAAAAAAAAAAAACATCCTACAAAATAGTTCTTCTTTTATA<br>ATAATAACAACAAAATTTTTTTTTTACTTCTCAGCGGATCATCTCTTGCATGAAGCATC<br>GAAGAACACCGCTACT |
| C35 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT              |
| C36 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAGTGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACAAT<br>AAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCAG<br>CT              |

Table 6 (continued)

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| C37 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTTGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAATAAAACATACAAAAAAGTTATACATATATTATAGTAATAA<br>CAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT             |
| C38 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTCGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAG<br>TAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT            |
| C39 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATATATA<br>TATTATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATG<br>GATCGATGAAGAACGCAGCT |
| C40 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATA<br>ACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT          |
| C41 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTATTAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATA<br>ACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT          |

Table 6 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C42 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAGTTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT         |
| C43 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAGGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT   |
| C44 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAAT<br>ACAATAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGTT       |
| C45 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTGGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATA<br>ACAATAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT         |
| C46 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACAT<br>ATATTATAGTAATAACAATAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCAT<br>GGATCGATGAAGAACGCAGCT |

Table 6 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C47 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAAT<br>AACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT         |
| C48 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAATAACA<br>ATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACGCA<br>GCT         |
| C49 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTATAGTAAT<br>AACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT         |
| C51 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGGGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATAGGCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGGGATCACTTGGCTCATGGAT<br>GGATGAAGAACGCAGCT |
| C52 Cat7 | AAAAAATAACACACCAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAACATACAAAAAGTTATACATATATTAT<br>AGTAATAACAATAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br>TGAAGAACGCAGCT         |

Table 6 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C55 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATAAC<br>AATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT              |
| C56 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATGAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAG<br>TAATAACAATAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATG<br>AAGAACGCAGCT       |
| C57 Cat7 | AAAAAATAACACAACAATGATCGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCGTTG<br>GTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGATA<br>GCTTAATTAATTTTATCATTTAATTAAGTAGACTTAATAAGCATTTGTGCTAGATATGCT<br>ACCAACAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTATAGTAATA<br>ACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAA<br>CGCAGCT              |
| C58 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATTATAGCTACCATATTATA<br>TTATGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAA<br>TTTTAATATGGTAGTAGCATAAGTAATAATAATAATAATATGAATAAACGGTGTTATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACTGTGCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATCTTATCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAACATACAAAAAAGTTATATATATATTATAGTAA<br>TAACAATAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGA<br>ACGCAGCT          |
| C59 Cat7 | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATAATATGAATAAACGG<br>TGTTATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAA<br>GATAAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTAT<br>GCTAGATATGCTACCAACAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATAT<br>ATTATAGTAATAACAATAAAAATTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGG<br>ATCGATGAAGAACGCAGCT |

Table 8 Nucleotide sequences of ITS1 region of *B. malayi*, *B. pahangi*, and *D. immitis*.

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AY621464Bm<br>( <i>B. malayi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| AY621465Bm<br>( <i>B. malayi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATGAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTGTCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAAT<br>AATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAA<br>GAACGCAGCT |
| AY621466Bm<br>( <i>B. malayi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGT<br>AATAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGAT<br>GAAGAACGCAGCT |
| AY621467Bm<br>( <i>B. malayi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTAA<br>TAATAATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGA<br>AGAACGCAGCT |
| AY621468Bm<br>( <i>B. malayi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATAGCTACCATATATATATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCG<br>TTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCG<br>ATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATAT<br>GCTACCAACAAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATATTATAGTA<br>ATAAAAAATTTTTTTTAACTCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAAC<br>GCAGCT       |

**Table 8** (continued)

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AY499507Bm<br>( <i>B. malayi</i> )  | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATATATATTATG<br>ATACTATATTAACAACATATTGTTGTATGTGTTATTAATAGATTGATGTTAATAATTTTA<br>ATATGGTAGTAGCATAAATAATAATAATAATAATATGAATAAACGGTGATATTCGTT<br>GGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGATAAAGCGAT<br>AGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCTAGATATGC<br>TACCAACAAAAAAAAAAAAAAAAAGACATACAAAAAATTATATATATTATAGTAATAATAA<br>TAAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGATGAAGAACG<br>CAGCT              |
| AY621469Bp<br>( <i>B. pahangi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAACAACATACAAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT      |
| AY621470Bp<br>( <i>B. pahangi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATCGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATTAT<br>AGTAATAACAATAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATCGA<br>TGAAGAACGCAGCT         |
| AY621471Bp<br>( <i>B. pahangi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTAATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAGAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATATT<br>ATAGTAATAACAATAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGATC<br>GATGAAGAACGCAGCT    |
| AY621472Bp<br>( <i>B. pahangi</i> ) | AAAAAATAACACAACAATGATTGAATTTATTATTATTATTATAGCTACCATATTATATTA<br>TGATACTATATTAACAACATATTGTTGTATGTGTTACTAATAGATTGATGTTGATAATTT<br>TAATATGGTAGTAGCATAAGTAATAATAATAATAATAATAATATGAATAAACGGTGT<br>TATTCGTTGGTGTCTATACTTTATCCAAGTTATCGCCTAACCGTCGATAACAATGAAGAT<br>AAAGCGATAGCTTAATTAATTTTACCATTTAATTAAGTAGACTTAATAAGCATTTATGCT<br>AGATATGCTACCAACAAAAAAAAAAAAAAAAAAAAAAAAACATACAAAAAAGTTATACATATAT<br>TATAGTAATAACAATAAAATTTTTTTTTTAACCTTAGCGGTGGATCACTTGGCTCATGGAT<br>CGATGAAGAACGCAGCT |
| AF217800Di<br>( <i>D. immitis</i> ) | TAATACTAATACTAATACTACTATTAACATCATTATGCTGCTTATTTTCATTCTTTTTCA<br>AATAATGCAAGAATGAAATAGAATGAATGAATGATGTTAATAGATTAATAGATGAATAG<br>TTAGTAGTAGTTAGTAGTTAGTTAGATAGATAGATAAATGAAATGATGATGAAATATTTT<br>TATTCGATCAATTGAATATAAACGGTGATATTCGTTGGTGTCTATATTTTATCTAAGTTA<br>TCGCCTAACCGTCGATAGCGATGAAGATAAAATGATAGCTTAATTGATGATGATTGCTCA<br>ATTAAGTAGACTTAATAAGCATTTTAGCTAGTATGCTACCAACAAAATAATACACACACA<br>CATACATACAATAATATGATATAATTGTTATTTATAATAATTTTTTCAA                                    |

Table 11 Nucleotide sequence alignment of the ITS1 region of *Brugia* spp. compared to *B. malayi*, *B. pahangi*, and *D. immitis*.

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|                                              |                                                              |    |
|----------------------------------------------|--------------------------------------------------------------|----|
| CLUSTAL W (1.83) multiple sequence alignment |                                                              |    |
| C16 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C36 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C41 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C45 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C57 Cat7                                     | AAAAAATAACACA---ACAATGATCG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C4 Cat6                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C42 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C35 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C8 Cat6                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C21 Cat7                                     | AAAAAATAACACA---ACAAAGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C38 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATT---AT---AGCCAC | 45 |
| C34 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATT---AT---AGCTAC | 45 |
| C23 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTGTTAT---AGCTAC | 48 |
| C43 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C22 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C17 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C57 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C30 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C36 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C56 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C13 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C15 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C59 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C26 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C30 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C18 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C52 Cat7                                     | AAAAAATAACACA---CCAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C9 Cat7                                      | AAAAAATAACACA---CCAATGATGG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C4 Cat7                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C20 Cat7                                     | AAAAAATAACACA---ACAAGGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C27 Cat7                                     | AAAAAATAACACA---ACAAGGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C14 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C40 Cat7                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C44 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C52 Cat6                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC | 48 |
| C56 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C53 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C22 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C4 Cat3                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---AAT---AGCTAC | 45 |
| C2 Cat4                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C27 Cat1                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TATTATAGCTAC | 48 |
| C26 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C6 Cat3                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT-----AGCTAC     | 42 |
| C63 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C40 Cat1                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C39 Cat1                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT-----AGCTAC     | 42 |
| C6 Cat5                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT-----AGCTAC     | 42 |
| C33 Cat1                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT-----AGCTAC     | 42 |
| C34 Cat1                                     | AAAAAATAACACA---CCAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C4 Cat1                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C7 Cat1                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C33 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C4 Cat4                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C1 Cat4                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C5 Cat3                                      | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C37 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTTT---TAT---AGCTAC | 45 |
| C55 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C3 Cat2                                      | AAAAAATAACACA---ACAGTGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C32 Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C2C Cat5                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C32 Cat1                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |
| C16 Cat1                                     | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC | 45 |

[illegible]

Table 11 (continued)

|            |                                                              |    |
|------------|--------------------------------------------------------------|----|
| AY499507Bm | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC  | 45 |
| C55 Cat1   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTAT---TAT---AGCTAC  | 45 |
| C17 Cat5   | --CTAAAAATACAC--ACAATGATTG-A---ATT-TATTA-TTAT---TATTATAGCTAC | 47 |
| C35 Cat5   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATAATTATTATAGCTAC  | 51 |
| C61 Cat5   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTAT---TATTATAGCTAC  | 48 |
| C30 Cat1   | AAAAAATAACACA--CCACAGAGTG-AGTGATT-TATTT-CTATTACTAT---AGCTCC  | 51 |
| C19 Cat1   | AAAAAATAACACA--CCAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C65 Cat1   | AAAAAATACCCA--CCAGGGTGG-ATTGATT-TTTTA-TTATTCTAT---AGCTCC     | 51 |
| C63 Cat1   | AAAAAATAACACA--CCAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTCC  | 51 |
| C61 Cat1   | AAAAAATACCCA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC   | 51 |
| C53 Cat1   | AAAAAATACCCA--CCAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC   | 51 |
| C50 Cat1   | AAAAAATACCCA--CCAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC   | 51 |
| C20 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C23 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C66 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C68 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| 107        | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C48 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C62 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C24 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C12 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C1 Cat1    | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C29 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C42 Cat1   | AAAAAATACCCA--GCAATGATTG-ATTGATT-TATTA-CTATTAGTAG---GGGTAC   | 51 |
| C9 Cat1    | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C51 Cat1   | AAAAAATAACACA--ACAATGATTG-ATTGATT-TATTA-CTATTACTAT---AGCTAC  | 51 |
| C3 Cat6    | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C15 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C6 Cat7    | AAAAAATAACACA--ACAATGATTG-A---ATT-TGTTA-TTATTATTAT---AGCTAC  | 48 |
| C34 Cat7   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C55 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C31 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C53 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C33 Cat7   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C40 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C2 Cat6    | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C50 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C49 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C13 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C20 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C10 Cat7   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C16 Cat7   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C26 Cat7   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C6 Cat6    | AAAAACAACGCA--TCAATGATTG-A---ATT-TATTA-TTATTATCAT---AGCTAC   | 48 |
| C24 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C11 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C58 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C28 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C62 Cat6   | AAAAAATAACACA--ACAAAGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C61 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C64 Cat6   | AAAAAATAACACA--ACAAAGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C23 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C63 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C2 Cat7    | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C37 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C1 Cat6    | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTAT-----AGCTAC   | 45 |
| C21 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTAT-----AGCTAC   | 45 |
| C54 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C28 Cat7   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C38 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| AY621472Bp | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C7 Cat6    | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C35 Cat6   | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| AY621469Bp | AAAAAATAACACA--ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |
| C19 Cat7   | AAAAAATAACACA--ACAAGGATGG-A---ATT-TATTA-TTATTATTAT---AGCTAC  | 48 |

Table 11 (continued)

|            |                                                                |     |
|------------|----------------------------------------------------------------|-----|
| C34 Cat6   | AAAAAATAACATA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C10 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGGTAC   | 48  |
| C51 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C9 Cat6    | AAAAAATAACACA---CCAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C55 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C8 Cat7    | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C47 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C49 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C45 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C48 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C57 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C46 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C12 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C48 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C46 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C19 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C43 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C43 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C56 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C38 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C32 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C47 Cat6   | AAAAAATAACACA---ACAAGGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| AY621470Bp | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C33 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| AY621471Bp | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C41 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C51 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C65 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C18 Cat6   | AAAAAATAACCCC---ACCATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C14 Cat7   | AAAAAATAACCCC---ACCATGATTG-A---ATT-TATTA-TTATTATTAT---AGCCAC   | 48  |
| C17 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C7 Cat7    | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C25 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C39 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C29 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C22 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTATTATAGCTAC   | 51  |
| C58 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTATTATAGCTAC   | 51  |
| C27 Cat6   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C46 Cat5   | AAAAAATAACACA---ACAATGACTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C36 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C37 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C25 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C42 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C29 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C32 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C1 Cat7    | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C31 Cat7   | AAAAAATAACTCA---GCAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C44 Cat7   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C28 Cat5   | AAAAAATAACACA---ACAATGATTG-A---ATT-TATTA-TTATTATTAT---AGCTAC   | 48  |
| C64 Cat1   | AAAAAATAACACCG---GCAATGATTGTATTGATT-TAATA-CTATTACCTCC---TCCGAA | 54  |
| C66 Cat6   | AAAATATTACACA---TCAACGATAG-A---ATT-TTTCA-TAATAAAGGC---GCCGA    | 47  |
| AF217800Di | TAATACTAATACTAATACTACTATTAACATCATTATGCTGCTTATTTTCATTCTTTTTCA   | 60  |
| C2 Cat5    | AGAAAGTAACAGAG---AATGAT-----ATG-CCTTA--TGTCCATATGCTTTTCAT      | 46  |
| C10 Cat5   | AGAAAGTAACAGAG---AATGAT-----ATG-CCTTA--TGTCCATATGCTTTTCAT      | 46  |
|            |                                                                | * * |
| C16 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C36 Cat5   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C41 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C45 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C57 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C4 Cat6    | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 10  |
| C42 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C35 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |
| C8 Cat6    | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA   | 100 |



Table 11 (continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C57 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C2 Cat1    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C43 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C36 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C6 Cat2    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C4 Cat2    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C37 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C17 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C5 Cat4    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C8 Cat1    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C11 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 97  |
| C41 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 97  |
| C64 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C65 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTGA  | 100 |
| C44 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C6 Cat1    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C51 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| AY621465Bm | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| AY621467Bm | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C58 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C21 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C1 Cat2    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C45 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C3 Cat1    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C18 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| AY621468Bm | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C56 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C54 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C57 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C5 Cat1    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C10 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C7 Cat2    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C5 Cat2    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C15 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C28 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C3 Cat4    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| AY621466Bm | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C25 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C46 Cat1   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C9 Cat5    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 97  |
| C12 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 98  |
| C7 Cat5    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 99  |
| C5 Cat5    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 99  |
| C4 Cat5    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 99  |
| C1 Cat3    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C49 Cat5   | CACATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C40 Cat5   | CA--TATATATAT--TATGATACCATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 98  |
| C50 Cat5   | CATATATATATAT--TATGATACCATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C66 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| AY621464Bm | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C7 Cat3    | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 100 |
| C22 Cat1   | CGCATCCATATATATTATGATACTGTATTAACAACATCTTGTTG--T-AGGTGTTAGTAA  | 102 |
| C1 Cat5    | CATATC--TATATATTATGATACTATATTAACAACATAGTGTTG--T-ATGTGTTATTAA  | 99  |
| AY499507Bm | CATAT---ATATATTATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA   | 98  |
| C55 Cat1   | CATAT---ATATATTATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA   | 98  |
| C17 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTATTAA  | 102 |
| C35 Cat5   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA  | 103 |
| C61 Cat5   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA  | 100 |
| C30 Cat1   | CCCAT---TATAT--TATGATACTATATTAACACCACATTGTGG--T-ATGTGTTACTAA  | 103 |
| C19 Cat1   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA  | 103 |
| C65 Cat1   | CATAT---TATTT--TAGGATCCTATATTACCACCATATTGTGG--T-AGGTGTTGTTCCC | 103 |
| C63 Cat1   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA  | 103 |
| C61 Cat1   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA  | 103 |
| C53 Cat1   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA  | 103 |
| C50 Cat1   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGGGCGTTACC  | 103 |



Table 11 (continued)

|            |                                                              |     |
|------------|--------------------------------------------------------------|-----|
| C12 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C48 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C46 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C19 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C43 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C43 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C56 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C38 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C32 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C47 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| AY621470Bp | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C33 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| AY621471Bp | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C41 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C51 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C65 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C18 Cat6   | CCTAT---TATAT--TATGATACTATATTAACCACCTATTGTTG--T-ATGTGTTACTAA | 100 |
| C14 Cat7   | CCTAT---TATAT--TATGATACTATATTAACCACCTATTGTTG--T-ATGTGTTACTAA | 100 |
| C17 Cat7   | CATAT---TATAT--TATGATACTATATTAACCACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C7 Cat7    | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C25 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C39 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C29 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C22 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 103 |
| C58 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 103 |
| C27 Cat6   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C46 Cat5   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C36 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C37 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C25 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C42 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C29 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C32 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C1 Cat7    | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C31 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C44 Cat7   | CATAT---TATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 100 |
| C28 Cat5   | CATATATATATAT--TATGATACTATATTAACAACATATTGTTG--T-ATGTGTTACTAA | 103 |
| C64 Cat1   | CATAGGGTAATAA-TGACAACCTCTTCCCGATCAGTTTGGCTG--T-ATGGGTTTTTAC  | 110 |
| C66 Cat6   | AAAATTTACATAT---GCATCCTATATTACCAACAACGGGTAG--T-AGGTGCCTTTAA  | 100 |
| AF217800Di | AATAATGCAAGAATGAAATAGAATGAATGATGTTTTAATAGATTAATAGATGAATAG    | 120 |
| C2 Cat5    | CAGAA---ATGA--TACTGAGTAGGATTTATCAAATGCAGATG--T-AAAATTTTTGTTG | 97  |
| C10 Cat5   | CAGAA---ATGA--TACTGAGTAGGATTTATCAAATGCAGATG--T-AAAATTTTTGTTG | 97  |
|            | * *                                                          |     |
| C16 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C36 Cat5   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C41 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-TTAAT--AATAA | 152 |
| C45 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C57 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C4 Cat6    | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C42 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C35 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C8 Cat6    | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C21 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C38 Cat5   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C34 Cat5   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 150 |
| C23 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C43 Cat5   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---CA-ATAAT--AATAA | 152 |
| C22 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C17 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C57 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C30 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C36 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C56 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |
| C13 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA | 152 |



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[illegible]



|            |                                                                 |     |
|------------|-----------------------------------------------------------------|-----|
| AY621471Bp | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAGTAATA-ATAAT--AATAA    | 155 |
| C41 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAGTAATA-ATAAT--AATA-    | 154 |
| C51 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAGTAATA-ATAAT--AATAA    | 155 |
| C65 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAGTAATA-ATAAT--AATAA    | 155 |
| C18 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C14 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C17 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C7 Cat7    | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCGTAAG---TA-ATAAT--AATAA    | 152 |
| C25 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C39 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C29 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C22 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 155 |
| C58 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 155 |
| C27 Cat6   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C46 Cat5   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C36 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C37 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C25 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C42 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C29 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C32 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C1 Cat7    | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C31 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-AAAAT--AATAA    | 152 |
| C44 Cat7   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAG---TA-ATAAT--AATAA    | 152 |
| C28 Cat5   | TAGATTGATGTTAATAATT--TTAATATGGTAGTAGCATAAAA---TA-ATAAT--AATAA   | 155 |
| C64 Cat1   | CCCTAATAGATTGAT--TT--GGAATCTGGGAGGAGCTTTAA--TT-ATTTT--AGTTA     | 160 |
| C66 Cat6   | TAAATTGTCCTAATTAATT--TAAATATGGTGTTAGCATAAT---TA-TTATT--ATCAT    | 152 |
| AF217800Di | TTAGTAGTAGTTAGTAGTTAGTTAGTAGATAGATAGATAAATGAA--ATG-ATGATGAAATAT | 177 |
| C2 Cat5    | GAGAAGGAAATGAAAACTCATATGGCATTTTTGCACAATTCAGGGTGTATAGTCAAAGTC    | 157 |
| C10 Cat5   | GAGAAGGAAATGAAAACTCATATGGCATTTTTGCACAATTCAGGGTGTATAGTCAAAGTC    | 157 |

|          |                                                              |     |
|----------|--------------------------------------------------------------|-----|
| C16 Cat6 | TAATA-----TGAATAAACGGAGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C36 Cat5 | TA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG           | 197 |
| C41 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C45 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C57 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C4 Cat6  | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C42 Cat6 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C35 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C8 Cat6  | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C21 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C38 Cat5 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C34 Cat5 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C23 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C43 Cat5 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C22 Cat7 | TAATAATAAT-----ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C17 Cat6 | TAAT-----ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C57 Cat6 | TAATAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C30 Cat7 | TAATAATAATAAT---ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C36 Cat6 | TAATAATAATAAT---ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C56 Cat6 | TAATAATAAT-----ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C13 Cat7 | TAATAATAAT-----ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C15 Cat7 | TAATAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C59 Cat6 | TAATAATAATAAT---ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C26 Cat6 | TAATAATAATAAT---ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C30 Cat6 | TAATAATAATAAT---ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C18 Cat7 | TAATAATAATGAT---ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C52 Cat7 | TAATAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C9 Cat7  | TAATAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C4 Cat7  | TAATAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C20 Cat7 | TAATAATAAT-----ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C27 Cat7 | TAATAATAAT-----ATGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C14 Cat6 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C40 Cat7 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C44 Cat6 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C52 Cat6 | TAATA-----TGAATAAACGGTGTATTTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C56 Cat5 | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 202 |

[illegible]

Table 11 (continued)

|            |                                                              |     |
|------------|--------------------------------------------------------------|-----|
| C54 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C57 Cat5   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C5 Cat1    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C10 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C7 Cat2    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C5 Cat2    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| Cat1C15    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C28 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C3 Cat4    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| AY621466Bm | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C25 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C46 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C9 Cat5    | TAATAATAA---T---ATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 203 |
| C12 Cat5   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 201 |
| C7 Cat5    | TAATAATAA---T---ATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 205 |
| C5 Cat5    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 202 |
| C4 Cat5    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 202 |
| C1 Cat3    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C49 Cat5   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C40 Cat5   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C50 Cat5   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C66 Cat5   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| AY621464Bm | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C7 Cat3    | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C22 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 205 |
| C1 Cat5    | TAATAATAA---T---ATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 203 |
| AY499507Bm | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 201 |
| C55 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 201 |
| C17 Cat5   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 205 |
| C35 Cat5   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 203 |
| C61 Cat5   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 203 |
| C30 Cat1   | TAATA-----TGAATAAACGGGGATATTTGTTGGGGGTGTATACTTTATCCAAG       | 198 |
| C19 Cat1   | TAATA-----TGAATAAACGGGGATATTTGTTGGGGGTGTATACTTTATCCAAG       | 198 |
| C65 Cat1   | TAATA-----GGATTAAACGGGGATTTTGGTGGGTGTTTATATTTATCCAAG         | 198 |
| C63 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C61 Cat1   | TAATA-----GGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C53 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C50 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C20 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C23 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C66 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C68 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| 107        | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C48 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C62 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C24 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C12 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C1 Cat1    | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C29 Cat1   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C42 Cat1   | TAATA-----GGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 199 |
| C9 Cat1    | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 198 |
| C51 Cat1   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG     | 201 |
| C3 Cat6    | TATTAATA---AT---CTGAGTTATTCGGGAGTCTATGCTTTATCCAATTTATCCCCT   | 209 |
| C15 Cat6   | TATTAATA---AT---ATGAGTTATCCGTTGGTAGTCTATGCTCTATACTTTATCCCCT  | 209 |
| C6 Cat7    | TAATAATATGAAT---ATGCAGAGTCAGTCTTAGTCGTCGATGCCTAACTTTATTCTCG  | 212 |
| C34 Cat7   | TAATAATA---AT---ATGATGAATCAGCGTTGTTCTTCGGTGGCGACTCTTCATCATCC | 209 |
| C55 Cat6   | TAATAATAATAAT---ATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C31 Cat6   | TAATAATA---AT---ATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C53 Cat6   | TAATAATAA---T---ATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C33 Cat7   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 203 |
| C40 Cat6   | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 203 |
| C2 Cat6    | TAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG        | 203 |
| C50 Cat6   | TAATAATAATA---TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG    | 209 |
| C49 Cat6   | TAATAATAATAATAATATGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG | 215 |
| C13 Cat6   | TAATAATAATA---TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG    | 209 |

Table 11 (continued)

|            |      |                                                              |     |
|------------|------|--------------------------------------------------------------|-----|
| C20        | Cat6 | TAATAATAATAAT---ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C10        | Cat7 | TAATAATAATAAT---ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C16        | Cat7 | TAATAATAATAAT---ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C26        | Cat7 | TAATAATAATAAT---ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C6         | Cat6 | TT-----TGAATAAACGGGTTTTTTGTTGGGGTTTATACTTTATCCAAG            | 200 |
| C24        | Cat6 | TA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG           | 200 |
| C11        | Cat6 | TAATAATAATAAT---ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C58        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C28        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C62        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C61        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C64        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C23        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C63        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C2         | Cat7 | TAATAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG     | 206 |
| C37        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C1         | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C21        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C54        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C28        | Cat7 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C38        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| AY621472Bp |      | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C7         | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C35        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| AY621469Bp |      | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C19        | Cat7 | TAATAATAATAA---TATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C34        | Cat6 | TAATAATAATAA---TATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C10        | Cat6 | TAA-----TATGAATAAACGGTGTTATTCGTTGGGGTCTATACTTTATCCAAG        | 200 |
| C51        | Cat7 | TAATAATAATAATAATGAATAAACGGTGTTATTCGTTGGGGTCTATACTTTATCCAAG   | 212 |
| C9         | Cat6 | TAATAATAATAA---TATGAATAAACGGTGTTATTCGTTGGGGTCTATACTTTATCCAAG | 209 |
| C55        | Cat7 | TAA-----TATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C8         | Cat7 | TAATAATAA-----TATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C47        | Cat7 | TAATAATAA-----TATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 203 |
| C49        | Cat7 | TAATAATAA-----TATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 203 |
| C45        | Cat6 | TAATAATAATAATAATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C48        | Cat6 | TAATAATAATAATAATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C57        | Cat7 | TAATAATAATAATAATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C46        | Cat7 | TAATAATAATAATAATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C12        | Cat6 | T-----AATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C48        | Cat7 | T-----AATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C46        | Cat6 | T-----AATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C19        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C43        | Cat7 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C43        | Cat6 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C56        | Cat7 | TAATAATAAT-----ATGAATGAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C38        | Cat7 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTCGGTGTCTATACTTTATCCAAG  | 209 |
| C32        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C47        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| AY621470Bp |      | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C33        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| AY621471Bp |      | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C41        | Cat6 | -----AT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG     | 200 |
| C51        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C65        | Cat6 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 209 |
| C18        | Cat6 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C14        | Cat7 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCCATACTTTATCCCAG        | 200 |
| C17        | Cat7 | TAATAATAAT-----ATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG  | 206 |
| C7         | Cat7 | TAATAATAATAATA---TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C25        | Cat6 | TAATAATAATAATA---TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 209 |
| C39        | Cat7 | TAATAATAATAATAATATGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG | 212 |
| C29        | Cat6 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C22        | Cat6 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 203 |
| C58        | Cat7 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 203 |
| C27        | Cat6 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |
| C46        | Cat5 | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG        | 200 |

Table 11 (continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C36 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C37 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C25 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C42 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C29 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C32 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C1 Cat7    | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG         | 200 |
| C31 Cat7   | TAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATGCTTTATCCAAG         | 200 |
| C44 Cat7   | TAATAATA-----TGAATAAACGGTGTTATTCGTTGGTGTCTATACTTTATCCAAG      | 203 |
| C28 Cat5   | TAATAATA-----TGAATAAACGGTGATATTCGTTGGTGTCTATACTTTATCCAAG      | 206 |
| C64 Cat1   | TAATA-----TGCAAAACCCGGGATTATCGTTGGTGGCTAAACTTTATCCAAG         | 208 |
| C66 Cat6   | TATTTGGG-----GAGATAATCGGTGTTATTGGGGGGTTTTTAACTTTTTTCAA-       | 202 |
| AF217800Di | TTTTATTTCGATCAATTGAATATAAACGGTGATATTCGTTGGTGTCTATATTTTATCTAAG | 237 |
| C2 Cat5    | CAAAGGAAAAGTTC---CTTTATTGGCACTTGAAAAATGCAGATTTACATTTGAACCTGG  | 214 |
| C10 Cat5   | CAAAGGAAAAGTTC---CTTTATTGGCACTTGAAAAATGCAGATTTACATTTGAACCTGG  | 214 |
| **         |                                                               |     |
| C16 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAAAATAAAGC--GATAGCTTAATTAATT-TTAC | 256 |
| C36 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 253 |
| C41 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C45 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C57 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C4 Cat6    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C42 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C35 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C8 Cat6    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C21 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C38 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C34 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-CTAT  | 254 |
| C23 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 256 |
| C43 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-CTAT  | 256 |
| C22 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C17 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C57 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C30 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 265 |
| C36 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAT  | 265 |
| C56 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C13 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C15 Cat7   | ATATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C59 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 265 |
| C26 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 265 |
| C30 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 265 |
| C18 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 265 |
| C52 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C9 Cat7    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C4 Cat7    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C20 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C27 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C14 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C40 Cat7   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C44 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C52 Cat6   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C56 Cat5   | TTATCGCC-TAACCGTCGATAACAACGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 258 |
| C53 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 261 |
| C22 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C4 Cat3    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATGAATT-TTAC  | 259 |
| C2 Cat4    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C27 Cat1   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C26 Cat5   | TTATCGCC-TAACCGTTGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C6 Cat3    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 258 |
| C63 Cat5   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 262 |
| C40 Cat1   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 259 |
| C39 Cat1   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C6 Cat5    | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |
| C33 Cat1   | TTATCGCC-TAACCGTCGATAACAATGAAGATAAAGC--GATAGCTTAATTAATT-TTAC  | 256 |

[illegible]

Table 11 (continued)

|            |      |                                                                      |     |
|------------|------|----------------------------------------------------------------------|-----|
| C9         | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C12        | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAGGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 257 |
| C7         | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 261 |
| C5         | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 258 |
| C4         | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 258 |
| C1         | Cat3 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C49        | Cat5 | TTATCGCC - CAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 256 |
| C40        | Cat5 | TTATCGCC - CAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 254 |
| C50        | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 256 |
| C66        | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| AY621464Bm |      | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C7         | Cat3 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C22        | Cat1 | TTCTCGCC - TTCCCGTCGCTATCAATGACGATAAAGC - -GAAAGCTTAATTAATT - TTAC   | 261 |
| C1         | Cat5 | TTATAGCC - TAACCGACGATAAAAAATGAAGATAAAGC - -AATAGCTTAATTAATT - ATAC  | 259 |
| AY499507Bm |      | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 257 |
| C55        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 257 |
| C17        | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 261 |
| C35        | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C61        | Cat5 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C30        | Cat1 | TTATCGCC - TAACCGTGGATAACAAGAAGATAAAGC - -GATAGCTTAATTAATT - TTTT    | 254 |
| C19        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C65        | Cat1 | TTATCGCT - TACCCGTGGATAACAATGAAGATAAAGC - -GAGAGCTTAATTAATT - TTAT   | 254 |
| C63        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C61        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C53        | Cat1 | TTAGCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATC - TTAT   | 254 |
| C50        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C20        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C23        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C66        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C68        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| 107        |      | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C48        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C62        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C24        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C12        | Cat1 | TTATCGCC - TAGCCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C1         | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C29        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 254 |
| C42        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT   | 255 |
| C9         | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 254 |
| C51        | Cat1 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 257 |
| C3         | Cat6 | AACCCTCC - ATAACAATGAAAAATAAGCGAAAGCTTA - -GTTAATTTAATCAATTT - ATTT  | 265 |
| C15        | Cat6 | ATACCGCC - AAACCGTCGATAAATAATGAAAAACTTTC - -GATAACTTAATTATTT - TTAT  | 265 |
| C6         | Cat7 | TCAACCCC - TCAACAACAATGACAATGAAGAGAAAGC - -TTAATCTTATTTACCT - TTTT   | 268 |
| C34        | Cat7 | TAATCATC - TACCCGCCGACAAATAATGATGAAAATAA - -GACAACCTTATTTATTT - TTTT | 265 |
| C55        | Cat6 | TTATCGCC - TAACCGTCAATAACAATGAAAAATAAAGC - -GATAGCTTAATTAATT - TTAC  | 268 |
| C31        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C53        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C33        | Cat7 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C40        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C2         | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 259 |
| C50        | Cat6 | TTATCGCC - CAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C49        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 271 |
| C13        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C20        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 268 |
| C10        | Cat7 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 268 |
| C16        | Cat7 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 268 |
| C26        | Cat7 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 268 |
| C6         | Cat6 | TTATTGCC - TAACCGTCGATAACCATGAAGATAAAGG - -GATAGCTTAATTAATT - TTTT   | 256 |
| C24        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 256 |
| C11        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 268 |
| C58        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C28        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C62        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C61        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |
| C64        | Cat6 | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC   | 265 |

Table 11 (continued)

|            |                                                                     |     |
|------------|---------------------------------------------------------------------|-----|
| C23 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C63 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C2 Cat7    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 262 |
| C37 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C1 Cat6    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTGATTAATT - TTAC  | 262 |
| C21 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 262 |
| C54 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C28 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C38 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATC - TTAC  | 265 |
| AY621472Bp | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C7 Cat6    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C35 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| AY621469Bp | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C19 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C34 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C10 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C51 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 268 |
| C9 Cat6    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C55 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C8 Cat7    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 262 |
| C47 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 259 |
| C49 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 259 |
| C45 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 268 |
| C48 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 268 |
| C57 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 268 |
| C46 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 268 |
| C12 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C48 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C46 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C19 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C43 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAGGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C43 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C56 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C38 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C32 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C47 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| AY621470Bp | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C33 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| AY621471Bp | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C41 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 256 |
| C51 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C65 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 265 |
| C18 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C14 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C17 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 263 |
| C7 Cat7    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 265 |
| C25 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 265 |
| C39 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 268 |
| C29 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C22 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 259 |
| C58 Cat7   | TTATCGCC - TAACGTGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATC - TTAT | 259 |
| C27 Cat6   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C46 Cat5   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C36 Cat7   | TTATCGCC - TAACCGTCGATAACAGTGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C37 Cat7   | TTATCGCC - TAACCGTTGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C25 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C42 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C29 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C32 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C1 Cat7    | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C31 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 256 |
| C44 Cat7   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAT  | 259 |
| C28 Cat5   | TTATCGCC - TAACCGTCGATAACAATGAAGATAAAGC - -GATAGCTTAATTAATT - TTAC  | 262 |
| C64 Cat1   | GTTTTACCCTATCGCCCATTTATAAATGGAGAAAAAGC - -CAAGCTTAATCACTT - TTAA    | 265 |
| C66 Cat6   | CTGACACCTTAAAATCAGTTAACCATTGAGTCAAAATCGAAAAGGTTATTTAATT - TACC      | 261 |

Table 11 (continued)

|            |                                                                     |     |
|------------|---------------------------------------------------------------------|-----|
| AF217800Di | TTATCGCC - TAACCGTCGATAGCGATGAAGATAAAAT - -GATAGCTTAATTGATGATGAT    | 294 |
| C2 Cat5    | CTATAACTCACTTGGAGAACTTGCATTGCCTTATAAGTGTGGAATAGATTTGGTGGTCCG        | 274 |
| C10 Cat5   | CTATAACTCACTTGGAGAACTTGCATTGACTGATAAGTGTGGAATAGATTTTGTGGTCTG        | 274 |
|            |                                                                     |     |
| C16 Cat6   | CATTTAATTAAGTAG - ACTTAATAAACATTTATGCTATATAT - GCTACCTACGCAAAAAA    | 314 |
| C36 Cat5   | CATTTAATTAAGTAG - ACTTAATAAACATTTATGCTAGATAT - GCTACCAAC - - - - -  | 303 |
| C41 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 311 |
| C45 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 311 |
| C57 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTGTGCTAGATAT - GCTACCAAC - - - AAAA | 311 |
| C4 Cat6    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 311 |
| C42 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C35 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C8 Cat6    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C21 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C38 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C34 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGAAAT - GCTACCAAC - - - AAAA | 308 |
| C23 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C43 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAAC - - - AAAA | 310 |
| C22 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTCCCAACAAAAAAA     | 320 |
| C17 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTCCCAACAAAAAAA     | 314 |
| C57 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 317 |
| C30 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 323 |
| C36 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 323 |
| C56 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 320 |
| C13 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 320 |
| C15 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 317 |
| C59 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 323 |
| C26 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 323 |
| C30 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 323 |
| C18 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 323 |
| C52 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCAACAAAAAAA     | 317 |
| C9 Cat7    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C4 Cat7    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C20 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C27 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C14 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C40 Cat7   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C44 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C52 Cat6   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C56 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 316 |
| C53 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 319 |
| C22 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C4 Cat3    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C2 Cat4    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAA - -  | 315 |
| C27 Cat1   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAGA    | 320 |
| C26 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAA - -  | 315 |
| C6 Cat3    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 316 |
| C63 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C40 Cat1   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C39 Cat1   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C6 Cat5    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C33 Cat1   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 314 |
| C34 Cat1   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C4 Cat1    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C7 Cat1    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C33 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 317 |
| C4 Cat4    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C1 Cat4    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C5 Cat3    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C37 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C55 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C3 Cat2    | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C32 Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 320 |
| C2C Cat5   | CATTTAATTAAGTAG - ACTTAATAAGCATTTATGCTAGATAT - GCTACCACCAAAAAAAA    | 323 |

[illegible]

Table 11 (continued)

|            |                                                                 |     |
|------------|-----------------------------------------------------------------|-----|
| C22 Cat1   | CTTTTACTTAAGTAG-ACCTTAATAAGCATTTACGCTAGATAT-GGTTCCACCAAAAAAAAAA | 319 |
| C1 Cat5    | CATTTACTTAATTAG-ACCTTCACAACCATTTATGCAAGATCT-CCTACCTACCAATAAAAA  | 317 |
| AY499507Bm | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACC---AACAAAA    | 311 |
| C55 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAAC-AAAAAAA   | 314 |
| C17 Cat5   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAAAA  | 319 |
| C35 Cat5   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAAAA  | 317 |
| C61 Cat5   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAAAA  | 317 |
| C30 Cat1   | CATTTAATTAAGTGG-AGTTAATAAGCATTATGCTAGATAT-GTCCCCCAAAAAA--       | 310 |
| C19 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTCCCCCAAAAAAAGA    | 312 |
| C65 Cat1   | CATTTAATTAAGGTAG-ACCTTAATAAGCTTTTATGCTAGATAT-GTCCCACCAAAAAA--   | 310 |
| C63 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTCCCACCAAAAAAAA    | 312 |
| C61 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTCCCACCAAAAAAAA    | 312 |
| C53 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTCCCACCAAAAAA--    | 310 |
| C50 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAG-GTCCCACCAAAAAA--    | 310 |
| C20 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTCCCACCAAAAAA-A    | 311 |
| C23 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAA-A    | 311 |
| C66 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCCACAAAAAA-A    | 311 |
| C68 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAA-A    | 311 |
| 107        | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACTAAAAA-A    | 311 |
| C48 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAA-A    | 311 |
| C62 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAA-A    | 311 |
| C24 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAA-A    | 311 |
| C12 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAA--     | 310 |
| C1 Cat1    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAA--     | 310 |
| C29 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAA--     | 310 |
| C42 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAG-GTACCAACAAAAA--     | 311 |
| C9 Cat1    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 312 |
| C51 Cat1   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 315 |
| C3 Cat6    | AATTAACTAAATAA-ACTTTTATGCTATATATGCTACCTAT-GTACCAACAAAAAAA       | 323 |
| C15 Cat6   | CATTTAACTAAATAA-ACTTTTTAGCCATTTATGCTACCTAT-GTACCAACAAAAAAA      | 323 |
| C6 Cat7    | CTTTTATATACTTAA-ACCTTAATTTATGCTTAAGCTGCAACC-GCCACCAACAAAAAAA    | 326 |
| C34 Cat7   | CACTTTTTAAATAAG-CTACTTAATAATTTTTGCTGCAAAA-GTGCCACCAACAAAAA      | 323 |
| C55 Cat6   | CATTTAATTAAGAAT-ACCTTAATAAGCATTTATGCTAGATCT-GTACCAACAAAAAAA     | 326 |
| C31 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C53 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C33 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 317 |
| C40 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 317 |
| C2 Cat6    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 317 |
| C50 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C49 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 329 |
| C13 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C20 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 326 |
| C10 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 326 |
| C16 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 326 |
| C26 Cat7   | CGTTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 326 |
| C6 Cat6    | CCTTTAATTAAGTAG-ACCTTAATAAGCCTTTATGCTAGATAT-GCTTCCCACAAAAAAA    | 314 |
| C24 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 314 |
| C11 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 326 |
| C58 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C28 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C62 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C61 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C64 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C23 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C63 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C2 Cat7    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 320 |
| C37 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C1 Cat6    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 320 |
| C21 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 320 |
| C54 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C28 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C38 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| AY621472Bp | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C7 Cat6    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |
| C35 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GTACCAACAAAAAAA     | 323 |

Table 11 (continued)

|            |                                                                 |     |
|------------|-----------------------------------------------------------------|-----|
| AY621469Bp | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C19 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C34 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C10 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAG-GCTACCAACAAAAAAA    | 314 |
| C51 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAG-GCTACCAACAAAAAAA    | 326 |
| C9 Cat6    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C55 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C8 Cat7    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 320 |
| C47 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 317 |
| C49 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 317 |
| C45 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 326 |
| C48 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 326 |
| C57 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 326 |
| C46 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 326 |
| C12 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C48 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C46 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C19 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACTAAAAAAA   | 323 |
| C43 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAAC-AAAAAAA   | 322 |
| C43 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C56 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C38 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C32 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C47 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTCCCAACAAAAAGAA   | 323 |
| AY621470Bp | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C33 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| AY621471Bp | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAGAAA   | 323 |
| C41 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C51 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C65 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C18 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C14 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C17 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 321 |
| C7 Cat7    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C25 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 323 |
| C39 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 326 |
| C29 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C22 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 317 |
| C58 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 317 |
| C27 Cat6   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C46 Cat5   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C36 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C37 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C25 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C42 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C29 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C32 Cat7   | CATTTAATTAAGTAG-ACCTTAACAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C1 Cat7    | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 314 |
| C31 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTNCCACCAAAAAAAA   | 314 |
| C44 Cat7   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 317 |
| C28 Cat5   | CATTTAATTAAGTAG-ACCTTAATAAGCATTTATGCTAGATAT-GCTACCAACAAAAAAA    | 320 |
| C64 Cat1   | CCATGGAATTAGTAAACCACAAAAAGGCTTTTGGCTGCACATTGGTCCCAACCTGAGGGC    | 325 |
| C66 Cat6   | AATTGAATAGAGTAG-ATTCACCAACCATTTACACCGTTTAT--TCATATTATAAATAT     | 317 |
| AF217800Di | TGCTCAATTAAGTAG-ACCTTAATAAGCATTTATGCTAG-TAT-GCTACCAACAAAAATAAT  | 351 |
| C2 Cat5    | GAAATAGTTGATTTAGAGTCTCAAATGATTTAATTCCAACCT-GATGTCTCAAAAAATCC    | 333 |
| C10 Cat5   | GAAATAGTTGATTTAGAGTCTCAAATGATTTAATTCCAACCT-GATGTCTAAAAAATCA     | 333 |
| *          |                                                                 |     |
| C16 Cat6   | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATTT- -TATAGTAATA- -ACA | 366 |
| C36 Cat5   | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATAT- -TATAGTAATA- -ACA | 355 |
| C41 Cat7   | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATAT- -TATAGTAATA- -ACA | 363 |
| C45 Cat7   | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATAT- -TATAGTAATA- -ACA | 363 |
| C57 Cat7   | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATAT- -TATAGTAATA- -ACA | 363 |
| C4 Cat6    | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATAT- -TATAGTAATA- -ACA | 363 |
| C42 Cat6   | AAAAAAAAAAAAAAAA- -CATACAAAAAAGT-TATACATATAT- -TATAGTAATA- -ACA | 362 |

Table 11 (continued)

|     |      |                                                                |     |
|-----|------|----------------------------------------------------------------|-----|
| C35 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 362 |
| C8  | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 362 |
| C21 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 362 |
| C38 | Cat5 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 360 |
| C34 | Cat5 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 358 |
| C23 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 362 |
| C43 | Cat5 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 360 |
| C22 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 369 |
| C17 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 363 |
| C57 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA  | 368 |
| C30 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA  | 375 |
| C36 | Cat6 | AAAAAAAAAAAAAAAAAACATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA  | 377 |
| C56 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 373 |
| C13 | Cat7 | AAAAAAAAAAAAAAAAAACATACAAAAAAGT-TATACAGATAT--TATAGTAATA---ACA  | 374 |
| C15 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 366 |
| C59 | Cat6 | AAAAAAAAAAAAAAAA--CCTACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 374 |
| C26 | Cat6 | AAAAAAAAAAAAAAAAAG-CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA | 376 |
| C30 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 373 |
| C18 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 372 |
| C52 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 370 |
| C9  | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 369 |
| C4  | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 368 |
| C20 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 372 |
| C27 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 373 |
| C14 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 364 |
| C40 | Cat7 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 363 |
| C44 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 362 |
| C52 | Cat6 | AAAAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 361 |
| C56 | Cat5 | AAAAAAA-----GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA---ATA    | 362 |
| C53 | Cat5 | AAAAAAA-----GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA---ATA    | 365 |
| C22 | Cat5 | AAAA-----GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA---ATA       | 356 |
| C4  | Cat3 | AAAAAAA-----GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA---ATA    | 362 |
| C2  | Cat4 | AAAAAAA-----GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA---ATA    | 359 |
| C27 | Cat1 | AAAAAAA-----GA--CATACAAAAAATTATATATATAT--TATAGTAATA---ATA      | 367 |
| C26 | Cat5 | AAAAAAA-----GA--CATACAAGAAATT--ATATATATAT--TATAGTAATA---ATA    | 360 |
| C6  | Cat3 | AAAAAAA-----GA--CATACAAAAA--AT--TATATATATAT--TATAGTAATA---ATA  | 362 |
| C63 | Cat5 | AAAAAAA-----GA--CATACAAAAAGAT--TATATATATAT--TATAGTAATA---ATA   | 367 |
| C40 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 364 |
| C39 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 359 |
| C6  | Cat5 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 362 |
| C33 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 358 |
| C34 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 366 |
| C4  | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 362 |
| C7  | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 363 |
| C33 | Cat5 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 363 |
| C4  | Cat4 | AAAA-----GA--CATACAAAAA--T--TATATATATAT--TATAGTAATA---ATA      | 362 |
| C1  | Cat4 | AAA-----GG--CATACAAAAA--T--TATATATATAT--TATAGTAATA---ATA       | 361 |
| C5  | Cat3 | AAAAAAA-----GA--CATACAAAAA--T--TATATATATAT--TATAGTAATA---ATA   | 364 |
| C37 | Cat5 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 365 |
| C55 | Cat5 | AAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA       | 363 |
| C3  | Cat2 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 366 |
| C32 | Cat5 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 368 |
| C20 | Cat5 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 371 |
| C32 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 364 |
| C16 | Cat1 | AAAAGAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA  | 366 |
| C13 | Cat1 | AA--AAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA   | 362 |
| C2  | Cat3 | AAAAAAA-----GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA---ATA    | 363 |
| C3  | Cat3 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATATATTATAGTAATA---ATA    | 367 |
| C49 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATATATTATAGTAATA---ATA    | 363 |
| C47 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATATATTATAGTAATA---ATA    | 364 |
| C2  | Cat2 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATATTATAGTAATA---ATA      | 365 |
| C38 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 361 |
| C31 | Cat1 | AAAAAAAG-----GA--CATACAAAAAAT--TATATATATAT--TATAGCAATA---ATA   | 362 |
| C35 | Cat1 | AAAAAAA-----GA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA    | 363 |
| C39 | Cat5 | AAAAAAA-----AGA--CATACAAAAAAT--TATATATATAT--TATAGTAATA---ATA   | 369 |

Table 11 (continued)

|            |                                                            |     |
|------------|------------------------------------------------------------|-----|
| C52 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 362 |
| C62 Cat5   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C57 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C2 Cat1    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C43 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C36 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C6 Cat2    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C4 Cat2    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C37 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C17 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 363 |
| C5 Cat4    | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 364 |
| C8 Cat1    | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 364 |
| C11 Cat1   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 362 |
| C41 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 361 |
| C64 Cat5   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 366 |
| C65 Cat5   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 365 |
| C44 Cat1   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 364 |
| C6 Cat1    | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 364 |
| C51 Cat5   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 364 |
| AY621465Bm | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 364 |
| AY621467Bm | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 365 |
| C58 Cat5   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 365 |
| C21 Cat1   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 365 |
| C1 Cat2    | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 365 |
| C45 Cat1   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 365 |
| C3 Cat1    | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 366 |
| C18 Cat1   | AAAAAAAAAAAAAGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA | 369 |
| AY621468Bm | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--A--   | 364 |
| C56 Cat1   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 366 |
| C54 Cat1   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 366 |
| C57 Cat5   | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 366 |
| C5 Cat1    | AAAAAAAAAAAAAGA--CTTACAAAAAAT-TATATATATAT--TATAGTAATA--ATA | 368 |
| C10 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATAT--TATAGTAATA--ATA      | 364 |
| C7 Cat2    | AAAAAAAA--GA--CATACAAAAAAT-TATATATAT--TATAGTAATA--ATA      | 364 |
| C5 Cat2    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 364 |
| C15 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 365 |
| C28 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TGTATATATAT--TATAGTAATA--ATA    | 366 |
| C3 Cat4    | AAAAAAAA--GA--CATACAAAAAAT-TATATACATAT--TATAGTAATA--ATA    | 366 |
| AY621466Bm | AAAAAAAA--AGA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA   | 367 |
| C25 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 366 |
| C46 Cat1   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 366 |
| C9 Cat5    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 365 |
| C12 Cat5   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 364 |
| C7 Cat5    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 368 |
| C5 Cat5    | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 363 |
| C4 Cat5    | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 364 |
| C1 Cat3    | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 366 |
| C49 Cat5   | AAAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA    | 362 |
| C40 Cat5   | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 358 |
| C50 Cat5   | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 362 |
| C66 Cat5   | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 365 |
| AY621464Bm | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 365 |
| C7 Cat3    | AAAAAAA--GA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA--ATA    | 366 |
| C22 Cat1   | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 368 |
| C1 Cat5    | AATAAAAGAC--A--CTTCCGATAAAAT-TATATACATAT--TATACTGTTA--GTA  | 365 |
| AY499507Bm | AAAAAAA--GA--CATACAA--AAAAT-TATATATATAT--TATAGTAATA--ATA   | 359 |
| C55 Cat1   | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 363 |
| C17 Cat5   | AAAAAAA--GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA--ATA    | 366 |
| C35 Cat5   | AAAAAAA--GA--CATACAAAAAAT-TATATATATAT--TATAGTAATA--ATA     | 366 |
| C61 Cat5   | AAAAAAA--GA--CATACAAAAAATT--ATATATATAT--TATAGTAATA--ATA    | 362 |
| C30 Cat1   | AA--AAAA--A--AAAAAAAAC--ATACACAAAT--TATATATATT--ATA        | 353 |
| C19 Cat1   | AA--AAAA--A--AAAAAAAAC--ATACACAAAT--TATATATATT--ATA        | 355 |
| C65 Cat1   | -A--AAAA--A--AAAAAAAAGC--CTGCCCAAAT--TATATATATT--ATA       | 352 |
| C63 Cat1   | AA--AAAA--A--AAAAAAAAC--ATACACAAAT--TATATATATT--ATA        | 355 |
| C61 Cat1   | AA--AAAA--A--AAAAAAAAC--ATACACAAAT--TATATATATT--ATA        | 355 |

Table 11 (continued)

|            |      |                                                                |     |
|------------|------|----------------------------------------------------------------|-----|
| C53        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA   | 353 |
| C50        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA   | 353 |
| C20        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA   | 354 |
| C23        | Cat1 | AA---TAAA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA   | 354 |
| C66        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAAACC--CTACCCAAAT--TATATATATT---ATA  | 354 |
| C68        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAAACC--TTACCCAAAT--TATATATATT---ATA  | 354 |
| 107        |      | AA---AAAA-----A-AAAAAAAA--ACC--CTCCCCCAAT--TATATATATT---ATA    | 352 |
| C48        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAA-C--ATACCCAAAT--TATATATATT---ATA   | 353 |
| C62        | Cat1 | AA---AAAA-----A-AAAAAAAAAAAAAC--ATACCCAAAT--TATATATATT---ATA   | 354 |
| C24        | Cat1 | AA---AAAA-----A-AAAAAAAA--C--ATACCCAAAT--TATATATATT---ATA      | 350 |
| C12        | Cat1 | -----AAAA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA   | 351 |
| C1         | Cat1 | -----AAAA-----A-AAAAAAAAAAAAACC--TTACACAAAT--TATATATATT---ATA  | 351 |
| C29        | Cat1 | -----AA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA     | 349 |
| C42        | Cat1 | -----AAAA-----A-AAAAAAAAAAAAAC--ATACACAAAT--TATATATATT---ATA   | 352 |
| C9         | Cat1 | AAAAAAAGA-----C--ATACAAAAAAATT--ATATATATAT--TATAGTAATA---ATA   | 358 |
| C51        | Cat1 | AA---AG-----C--ATACAAAAAAATT--ATATATATAT--TATAGTAATA---ATA     | 357 |
| C3         | Cat6 | A--CATACAAA-----ACAT-----T-TATACATATTT--TATATTAATA---ACA       | 361 |
| C15        | Cat6 | AAACATACAAA-----ACAT-----T-CATACATGTTT--TACATAAATA---ACA       | 363 |
| C6         | Cat7 | AAAAAACATAC-----ACATAC--GT-TATATTTATAT--TTTAGTAATA---ACA       | 370 |
| C34        | Cat7 | AAAAAACATC-----CTACAAA--AT-AGTTCCTTCTTT--TATAATAATA---ACA      | 369 |
| C55        | Cat6 | AAAAAAAAAAAAACAC--CCTACAAAAAAAGT-TATATATTTAT--TATAGTAATA---ACA | 378 |
| C31        | Cat6 | AAAAAAAAAACATAC--CATACAATAATGT-TTTTTTTATAT--TATAAATA---ACA     | 375 |
| C53        | Cat6 | AAAAAAAAAAAA--AA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA  | 372 |
| C33        | Cat7 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 367 |
| C40        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT--ATATATATAT--TATAGTAATA---ACA    | 364 |
| C2         | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 367 |
| C50        | Cat6 | AAAA-----CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA           | 364 |
| C49        | Cat6 | AAAAAAAA-----CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA       | 374 |
| C13        | Cat6 | AAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA      | 370 |
| C20        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 376 |
| C10        | Cat7 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 376 |
| C16        | Cat7 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 377 |
| C26        | Cat7 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 379 |
| C6         | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 366 |
| C24        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 365 |
| C11        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 378 |
| C58        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 374 |
| C28        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 374 |
| C62        | Cat6 | AAAAAAAAAAAAAA--CTTCCAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 373 |
| C61        | Cat6 | AAAAAAAAAAAAAA--CTTACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 376 |
| C64        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 373 |
| C23        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 372 |
| C63        | Cat6 | AAAAAAAAAAAAAA--CTTACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 375 |
| C2         | Cat7 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 371 |
| C37        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 372 |
| C1         | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 372 |
| C21        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA    | 371 |
| C54        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 375 |
| C28        | Cat7 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 374 |
| C38        | Cat6 | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 374 |
| AY621472Bp |      | AAAAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 373 |
| C7         | Cat6 | AAAAAAAAAAAA--AA-CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA   | 372 |
| C35        | Cat6 | AAAAAAAAAAAA--AA-CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA   | 372 |
| AY621469Bp |      | AAAAAAAAAAAC--AA-CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA   | 373 |
| C19        | Cat7 | AAAAAAAAAAAA--AAACATACAAAAAAGT-TATACATATAT--TATGGTAATA---ACA   | 374 |
| C34        | Cat6 | AAAAAAAAAAAA--AAACATACAAAAAAGT-TATACATATAT--TATGGTAATA---ACA   | 374 |
| C10        | Cat6 | AAAAAA-----AACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA       | 360 |
| C51        | Cat7 | AAAAAA-----AACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA       | 373 |
| C9         | Cat6 | AAAAAAAAAAAA--AAACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA   | 374 |
| C55        | Cat7 | AAAAAA-----AACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA       | 361 |
| C8         | Cat7 | AAAAAAAAAAAA--ACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA     | 369 |
| C47        | Cat7 | AAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA      | 364 |
| C49        | Cat7 | AAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA      | 364 |
| C45        | Cat6 | AAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA      | 374 |
| C48        | Cat6 | AAAAAAAAAAAA--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA      | 373 |

Table 11 (continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C57 Cat7   | AAAAAAAAAAAA--A--CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 375 |
| C46 Cat7   | AAAAAAAAAAAA--AAACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 377 |
| C12 Cat6   | AAAAAAAAAAAA-----CATACAAAAA-GT-TATACATATAT--TATAGTAATA---ACA  | 359 |
| C48 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 360 |
| C46 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 361 |
| C19 Cat6   | AAAAAAAAAAAA--AAACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 373 |
| C43 Cat7   | AAAAAAAAAAAA--AAACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 372 |
| C43 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 360 |
| C56 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 368 |
| C38 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 368 |
| C32 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 369 |
| C47 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 371 |
| AY621470Bp | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 370 |
| C33 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 370 |
| AY621471Bp | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 372 |
| C41 Cat6   | GAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 360 |
| C51 Cat6   | AAAAAAAGAAA-----ACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 372 |
| C65 Cat6   | AAAAAAA-AAA-----ACATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 371 |
| C18 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 362 |
| C14 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 360 |
| C17 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 367 |
| C7 Cat7    | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 368 |
| C25 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 370 |
| C39 Cat7   | AAAAAAAAAAAA-----ACATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA | 376 |
| C29 Cat6   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 360 |
| C22 Cat6   | AAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA       | 361 |
| C58 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATATATATAT--TATAGTAATA---ACA  | 365 |
| C27 Cat6   | AAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA       | 358 |
| C46 Cat5   | AAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA       | 358 |
| C36 Cat7   | AAAAA---AA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 358 |
| C37 Cat7   | AAAAATAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA   | 362 |
| C25 Cat7   | AAAAAAA--AA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA   | 360 |
| C42 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 361 |
| C29 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 361 |
| C32 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 361 |
| C1 Cat7    | AAAAAAGAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA    | 361 |
| C31 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 361 |
| C44 Cat7   | AAAAAAAAAAAA-----CATACAAAAAAGT-TATACATATAT--TATAGTAATA---ACA  | 364 |
| C28 Cat5   | AAAAAAGA-----CTTCCACATACAC-TCCACACACACCTCAGGGGTATG---ACA      | 367 |
| C64 Cat1   | AATTATC-----TTTAAAAAGAAGT-CGTGCCCCCCTTTCAAGTCATATTTGCG        | 374 |
| C66 Cat6   | AATTACTTATGCTACTACCATTAAAAATTATTAACATCAATCTATTAGTAACACATACA   | 377 |
| AF217800Di | A-----CACACACACATACATACAATAATATGATATAATTGTTA---TTT            | 393 |
| C2 Cat5    | GATAGATGG-----GACCGCAGAGAC--CTCCCCATGT-----TTAACAC--ACA       | 374 |
| C10 Cat5   | GATAGATGG-----GACCGCAGAGAC--CTCCCCATGT-----TTAACAC--ACA       | 374 |
|            |                                                               |     |
| C16 Cat6   | ATAAAATTTTTTTTT--AACTCTTATCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 421 |
| C36 Cat5   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 410 |
| C41 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C45 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C57 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C4 Cat6    | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C42 Cat6   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C35 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C8 Cat6    | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C21 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C38 Cat5   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 415 |
| C34 Cat5   | ATAAACTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 413 |
| C23 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C43 Cat5   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 415 |
| C22 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 424 |
| C17 Cat6   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C57 Cat6   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 422 |
| C30 Cat7   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 430 |
| C36 Cat6   | ATAAAATTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 432 |

Table 11 (continued)

|     |      |                                                                  |     |
|-----|------|------------------------------------------------------------------|-----|
| C56 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 428 |
| C13 | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 429 |
| C15 | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 421 |
| C59 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 429 |
| C26 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 431 |
| C30 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 428 |
| C18 | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA  | 427 |
| C52 | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 425 |
| C9  | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 424 |
| C4  | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 422 |
| C20 | Cat7 | ATAAAAATTTTTTTTT -- AACCCCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 427 |
| C27 | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 428 |
| C14 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 419 |
| C40 | Cat7 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C44 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C52 | Cat6 | ATAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 416 |
| C56 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-TCTTATGGATCGATGAAG    | 419 |
| C53 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 422 |
| C22 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 413 |
| C4  | Cat3 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 419 |
| C2  | Cat4 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 416 |
| C27 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 424 |
| C26 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTCG-GCTCATGGATCGATGAAG    | 417 |
| C6  | Cat3 | ATAAAAATT-TTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 418 |
| C63 | Cat5 | ATAAAAATT-TTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 423 |
| C40 | Cat1 | ATAAAAATCTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG      | 421 |
| C39 | Cat1 | ATAAAAATTTTTT-TT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 415 |
| C6  | Cat5 | ATAAAAATTTTTT-TT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 418 |
| C33 | Cat1 | ATAAAAATTTTTT-TT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 414 |
| C34 | Cat1 | ATAAAAATTTTTT-TT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 422 |
| C4  | Cat1 | ATAAAAATTTTTT-TT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 418 |
| C7  | Cat1 | ATAAAAATTTTTTCTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 420 |
| C33 | Cat5 | ATAAAAATTTTTT-TT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 419 |
| C4  | Cat4 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 419 |
| C1  | Cat4 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 418 |
| C5  | Cat3 | ATAAAAAATCTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 421 |
| C37 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 422 |
| C55 | Cat5 | ATAAAAAATTTTTTTTT -- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 419 |
| C3  | Cat2 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 423 |
| C32 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 426 |
| C20 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 428 |
| C32 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 421 |
| C16 | Cat1 | ATAAAA-TTTTTTTTT AACTCTTAGCG-GGGGATCACTTG-GCTCATGGATCGATGAAG     | 422 |
| C13 | Cat1 | ATAAAAAGTTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 419 |
| C2  | Cat3 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C3  | Cat3 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 424 |
| C49 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C47 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 421 |
| C2  | Cat2 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 422 |
| C38 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 418 |
| C31 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 419 |
| C35 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C39 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 426 |
| C52 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 419 |
| C62 | Cat5 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C57 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C2  | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C43 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C36 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C6  | Cat2 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C4  | Cat2 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C37 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C17 | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 420 |
| C5  | Cat4 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 421 |
| C8  | Cat1 | ATAAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 421 |

Table 11 (continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C11 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 419 |
| C41 Cat1   | A--AAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 415 |
| C64 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C65 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C44 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C6 Cat1    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C51 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| AY621465Bm | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| AY621467Bm | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C58 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C21 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C1 Cat2    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C45 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C3 Cat1    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C18 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 426 |
| AY621468Bm | ---AAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 417 |
| C56 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C54 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C57 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C5 Cat1    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 425 |
| C10 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C7 Cat2    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C5 Cat2    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C15 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C28 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C3 Cat4    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| AY621466Bm | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 424 |
| C25 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C46 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C9 Cat5    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C12 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C7 Cat5    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 424 |
| C5 Cat5    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 420 |
| C4 Cat5    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 42  |
| C1 Cat3    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C49 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCTCTTG-GCTCATGGATCGATGAAG | 419 |
| C40 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 415 |
| C50 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 419 |
| C66 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| AY621464Bm | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 421 |
| C7 Cat3    | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C22 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 425 |
| C1 Cat5    | ATAAAAATTTTTTTTTT-AACTCCTAGCC-GCGGATCTCTTG-GCTCATGGACCGCTGAAT | 422 |
| AY499507Bm | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 416 |
| C55 Cat1   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 420 |
| C17 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C35 Cat5   | ATAAAAATTTTCTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 423 |
| C61 Cat5   | ATAAAAATTTTTTTTTT-AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 419 |
| C30 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 407 |
| C19 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 409 |
| C65 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 406 |
| C63 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 409 |
| C61 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 409 |
| C53 Cat1   | GTAATAAATTTTT---AACTCTCAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 407 |
| C50 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GGGGATCACTTG-GCTCATGGATCGATGAAG   | 407 |
| C20 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 408 |
| C23 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 408 |
| C66 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 408 |
| C68 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 408 |
| 107        | GTAATAAATTTTT---AACTCTTAACG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 406 |
| C48 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 407 |
| C62 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 408 |
| C24 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 404 |
| C12 Cat1   | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 405 |
| C1 Cat1    | GTAATAAATTTTT---AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 405 |

Table 11 (continued)

|            |      |                                                                  |     |
|------------|------|------------------------------------------------------------------|-----|
| C29        | Cat1 | GTAATAAATTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG    | 403 |
| C42        | Cat1 | GTAATAAATTTTT --- AACTCTTAGCG-GGGGATCACTTG-GCTCATGGATGGAGGAAG    | 406 |
| C9         | Cat1 | ATAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 415 |
| C51        | Cat1 | ATAAAAATTTTTTTTT AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG     | 414 |
| C3         | Cat6 | ATAATATTTTTTTTTAT --- TTCTTATCG-CTGGATCACTTG-GATCATGTATCTATGAAA  | 416 |
| C15        | Cat6 | ATAAAATCTTTTTAAT --- TTCTTTTAA-CTCGAACCGTTG-GATCACGTGTCTCAGGAA   | 418 |
| C6         | Cat7 | ATAACATTTTTT - - - - - TTTTTTTAA-CTCTTAGATCTG-TATCCCCTGGCTCCGGGA | 421 |
| C34        | Cat7 | ACAAAATTTTTTTTTT --- TACTTCTCA-GCGGATCATCTC-TTGCATGAAGCATCGAAG   | 424 |
| C55        | Cat6 | ATAAT-TTTTTTTAAC --- CTCTTAGCG-GAGGATCTCTTG-CCTCATGGATCGATGAAA   | 432 |
| C31        | Cat6 | ATTTT-TTTTTTTACT --- CTCCTAGGG-ATGAATCGCTTG-ACGCATGGATCAATAAAG   | 429 |
| C53        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 427 |
| C33        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 421 |
| C40        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 418 |
| C2         | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 421 |
| C50        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 419 |
| C49        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 428 |
| C13        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 424 |
| C20        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 430 |
| C10        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 430 |
| C16        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 431 |
| C26        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 433 |
| C6         | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 420 |
| C24        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 419 |
| C11        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 432 |
| C58        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAA   | 428 |
| C28        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 428 |
| C62        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 427 |
| C61        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 430 |
| C64        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 427 |
| C23        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 426 |
| C63        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 429 |
| C2         | Cat7 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 425 |
| C37        | Cat6 | ATAAAATTTTTTTA --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 426 |
| C1         | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 427 |
| C21        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 426 |
| C54        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 430 |
| C28        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 429 |
| C38        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 429 |
| AY621472Bp |      | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 428 |
| C7         | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 427 |
| C35        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 427 |
| AY621469Bp |      | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 428 |
| C19        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GGGGATCACTGG-GCTCAGGGATGGAGGAAG  | 429 |
| C34        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GGGGATCACTGG-GCTCAGGGATGGAGGAAG  | 429 |
| C10        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGGG-GGGGATCACTGG-GCTCAGGGATGGAGGAAG  | 414 |
| C51        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GGGGATCACTTG-GCTCATGGATGGATGAAG  | 428 |
| C9         | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATGGATGAAG  | 429 |
| C55        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 416 |
| C8         | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 424 |
| C47        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 419 |
| C49        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 419 |
| C45        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 429 |
| C48        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 427 |
| C57        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 430 |
| C46        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 432 |
| C12        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 413 |
| C48        | Cat7 | ATAAAA-TTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG   | 414 |
| C46        | Cat6 | ATAAAACTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 416 |
| C19        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 428 |
| C43        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 427 |
| C43        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 415 |
| C56        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 423 |
| C38        | Cat7 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 423 |
| C32        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 424 |
| C47        | Cat6 | ATAAAATTTTTTTTT --- AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 426 |

Table 11 (continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| AY621470Bp | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 425 |
| C33 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 425 |
| AY621471Bp | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 427 |
| C41 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 415 |
| C51 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 427 |
| C65 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 426 |
| C18 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 417 |
| C14 Cat7   | ATAAAATTTTTTTTTT--AACTCTTACCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 415 |
| C17 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 422 |
| C7 Cat7    | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 423 |
| C25 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 425 |
| C39 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 431 |
| C29 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 415 |
| C22 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 416 |
| C58 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 419 |
| C27 Cat6   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 413 |
| C46 Cat5   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 413 |
| C36 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 413 |
| C37 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 417 |
| C25 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 415 |
| C42 Cat7   | ATAAAGTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG  | 416 |
| C29 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 416 |
| C32 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 416 |
| C1 Cat7    | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 416 |
| C31 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 416 |
| C44 Cat7   | ATAAAATTTTTTTTTT--AACTCTTAGCG-GTGGATCACTTG-GCTCATGGATCGATGAAG | 419 |
| C28 Cat5   | GAGAGAGGTGTTTCAT--ACTTTTGGTGTGAGGTTCCAGCAGAGCTCATCAAGACAAGTAG | 425 |
| C64 Cat1   | CTAAAAATTTTTTTT--GACCTTACCGGGGGGATCCCCTGGGGCCTGGGGCCTTTTAAA   | 430 |
| C66 Cat6   | ACAATATGTTGTTAATATAGTATCATAATATAATATGGTAG--CTATAATAATAATAATA  | 435 |
| AF217800Di | ATAATAATTTTCAA-----                                           | 408 |
| C2 Cat5    | ATGGCCTTTTGTTTCAG--TCCCCTACCAAGAAAGTCTCTGAAAATAAATGTTTGCTACAG | 432 |
| C10 Cat5   | ATGGCCTTTTGTTTCAG--TCCCCTACCAAGAAAGTCTCTGAAAATAAATGTTTGCTACAG | 432 |
| *          |                                                               |     |
| C16 Cat6   | AA---CGCAACT                                                  | 430 |
| C36 Cat5   | AA---CGCAGCT                                                  | 419 |
| C41 Cat7   | AA---CGCAGCT                                                  | 427 |
| C45 Cat7   | AA---CGCAGCT                                                  | 427 |
| C57 Cat7   | AA---CGCAGCT                                                  | 427 |
| C4 Cat6    | AA---CGCAGCT                                                  | 427 |
| C42 Cat6   | AA---CGCAGCT                                                  | 426 |
| C35 Cat7   | AA---CGCAGCT                                                  | 426 |
| C8 Cat6    | AA---CGCAGCT                                                  | 426 |
| C21 Cat7   | AA---CGCAGCT                                                  | 426 |
| C38 Cat5   | AA---CGCAGCT                                                  | 424 |
| C34 Cat5   | AA---CGCAGCT                                                  | 422 |
| C23 Cat7   | AA---CGCAGCT                                                  | 426 |
| C43 Cat5   | AA---CGCAGCT                                                  | 424 |
| C22 Cat7   | AA---CGCAGCT                                                  | 433 |
| C17 Cat6   | AA---CGCAGCT                                                  | 427 |
| C57 Cat6   | AA---CGCAGCT                                                  | 431 |
| C30 Cat7   | AA---CGCAGCT                                                  | 439 |
| C36 Cat6   | AA---CGCAGCT                                                  | 441 |
| C56 Cat6   | AA---CGCAGCT                                                  | 437 |
| C13 Cat7   | AA---CGCACCT                                                  | 438 |
| C15 Cat7   | AA---CGCAGCT                                                  | 430 |
| C59 Cat6   | AA---CGCAGCT                                                  | 438 |
| C26 Cat6   | AA---CGCAGCT                                                  | 440 |
| C30 Cat6   | AA---CGCAGCT                                                  | 437 |
| C18 Cat7   | AA---CGCAGCT                                                  | 436 |
| C52 Cat7   | AA---CGCAGCT                                                  | 434 |
| C9 Cat7    | AA---CGCAGCT                                                  | 433 |
| C4 Cat7    | AA---CGCAGCT                                                  | 431 |
| C20 Cat7   | AA---CGCAGCT                                                  | 436 |
| C27 Cat7   | AA---CGCAGCT                                                  | 437 |

Table 11 (continued)

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|            |      |              |     |
|------------|------|--------------|-----|
| C14        | Cat6 | AA---CGCAGCT | 428 |
| C40        | Cat7 | AA---CGCAGCT | 427 |
| C44        | Cat6 | AA---CGCAGCT | 426 |
| C52        | Cat6 | AA---CGCAGCT | 425 |
| C56        | Cat5 | AA---CGCAGCT | 428 |
| C53        | Cat5 | AA---CGCAGCT | 431 |
| C22        | Cat5 | AA---CGCAGCT | 422 |
| C4         | Cat3 | AA---CGCAGCT | 428 |
| C2         | Cat4 | AA---CGCAGCT | 425 |
| C27        | Cat1 | AA---CGCAGCT | 433 |
| C26        | Cat5 | AA---CGCAGCT | 426 |
| C6         | Cat3 | AA---CGCAGCT | 427 |
| C63        | Cat5 | AA---CGCAGCT | 432 |
| C40        | Cat1 | AA---CGCAGCT | 430 |
| C39        | Cat1 | AA---CGCGGCT | 424 |
| C6         | Cat5 | AA---CGCGGCT | 427 |
| C33        | Cat1 | AA---CGCGGCT | 423 |
| C34        | Cat1 | AA---CGCGGCT | 431 |
| C4         | Cat1 | AA---CGCGGCT | 427 |
| C7         | Cat1 | AA---CGCAGCT | 429 |
| C33        | Cat5 | AA---CGCAGCT | 428 |
| C4         | Cat4 | AA---CGCAGCT | 428 |
| C1         | Cat4 | AA---CGCAGCT | 427 |
| C5         | Cat3 | AA---CGCAGCT | 430 |
| C37        | Cat5 | AA---CGCAGCT | 431 |
| C55        | Cat5 | AA---CGCAGCT | 428 |
| C3         | Cat2 | AA---CGCAGCT | 432 |
| C32        | Cat5 | AA---CGCAGCT | 435 |
| C2C        | Cat5 | AA---CGCAGCT | 437 |
| C32        | Cat1 | AA---CGCAGCT | 430 |
| C16        | Cat1 | AA---CGCAGCT | 431 |
| C13        | Cat1 | AA---CGCAGCT | 428 |
| C2         | Cat3 | AA---CGCAGCT | 429 |
| C3         | Cat3 | AA---CGCAGCT | 433 |
| C49        | Cat1 | AA---CGCAGCT | 429 |
| C47        | Cat1 | AA---CGCAGCT | 430 |
| C2         | Cat2 | AA---CGCAGCT | 431 |
| C38        | Cat1 | AA---CGCAGCT | 427 |
| C31        | Cat1 | AA---CGCAGCT | 428 |
| C35        | Cat1 | AA---CGCAGCT | 429 |
| C39        | Cat5 | AA---CGCAGCT | 435 |
| C52        | Cat1 | AA---CGCAGCT | 428 |
| C62        | Cat5 | AA---CGCAGCT | 429 |
| C57        | Cat1 | AA---CGCAGCT | 429 |
| C2         | Cat1 | AA---CGCAGCT | 429 |
| C43        | Cat1 | AA---CGCAGCT | 429 |
| C36        | Cat1 | AA---CGCAGCT | 429 |
| C6         | Cat2 | AA---CGCAGCT | 429 |
| C4         | Cat2 | AA---CGCAGCT | 429 |
| C37        | Cat1 | AA---CGCAGCT | 429 |
| C17        | Cat1 | AA---CGCAGCT | 429 |
| C5         | Cat4 | AA---CGCAGCT | 430 |
| C8         | Cat1 | AA---CGCAGCT | 430 |
| C11        | Cat1 | AA---CGCAGCT | 428 |
| C41        | Cat1 | AA---CGCAGCT | 424 |
| C64        | Cat5 | AA---CGCAGCT | 432 |
| C65        | Cat5 | AA---CGCAGCT | 431 |
| C44        | Cat1 | AA---CGCAGCT | 430 |
| C6         | Cat1 | GA---CGCAGCT | 430 |
| C51        | Cat5 | AA---CGCAGCT | 430 |
| AY621465Bm |      | AA---CGCAGCT | 430 |
| AY621467Bm |      | AA---CGCAGCT | 431 |
| C58        | Cat5 | AA---CGCAGCT | 431 |
| C21        | Cat1 | AA---CGCAGCT | 431 |
| C1         | Cat2 | AA---CGCAGCT | 431 |

Table 11 (continued)

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|            |              |     |
|------------|--------------|-----|
| C45 Cat1   | AA---CGCAGCT | 431 |
| C3 Cat1    | AA---CGCAGCT | 432 |
| C18 Cat1   | AA---CGCAGCT | 435 |
| AY621468Bm | AA---CGCAGCT | 426 |
| C56 Cat1   | AA---CGCAGCT | 432 |
| C54 Cat1   | AA---CGCAGCT | 432 |
| C57 Cat5   | AA---CGCAGCT | 432 |
| C5 Cat1    | AA---CGCAGCT | 434 |
| C10 Cat1   | AA---CGCAGCT | 430 |
| C7 Cat2    | AA---CGCAGCT | 430 |
| C5 Cat2    | AA---CGCAGCT | 430 |
| C15 Cat1   | AA---CGCAGCT | 431 |
| C28 Cat1   | AA---CGCAGCT | 432 |
| C3 Cat4    | AA---CGCAGCT | 432 |
| AY621466Bm | AA---CGCAGCT | 433 |
| C25 Cat1   | AA---CGCAGCT | 432 |
| C46 Cat1   | AA---CGCAGCT | 432 |
| C9 Cat5    | AA---CGCAGCT | 431 |
| C12 Cat5   | AA---CGCAGCT | 430 |
| C7 Cat5    | AA---CGCAGCT | 433 |
| C5 Cat5    | AA---CGCAGCT | 429 |
| C4 Cat5    | AA---CGCAGCT | 430 |
| C1 Cat3    | AA---CGCAGCT | 432 |
| C49 Cat5   | AA---CGCAGCT | 428 |
| C40 Cat5   | AA---CGCAGCT | 424 |
| C50 Cat5   | AA---CGCAGCT | 428 |
| C66 Cat5   | AA---CGCAGCT | 430 |
| AY621464Bm | AA---CGCAGCT | 430 |
| C7 Cat3    | AA---CGCAGCT | 432 |
| C22 Cat1   | AA---CGCAGCT | 434 |
| C1 Cat5    | AA---CACATCT | 431 |
| AY499507Bm | AA---CGCAGCT | 425 |
| C55 Cat1   | AA---CGCAGCT | 429 |
| C17 Cat5   | AA---CGCAGCT | 431 |
| C35 Cat5   | AA---CGCAGCT | 432 |
| C61 Cat5   | AA---CGCAGCT | 428 |
| C30 Cat1   | AA---CGCAGCT | 416 |
| C19 Cat1   | AA---CGCAGCT | 418 |
| C65 Cat1   | AA---CGCAGCT | 415 |
| C63 Cat1   | AA---CGCAGCT | 418 |
| C61 Cat1   | AA---CGCAGCT | 418 |
| C53 Cat1   | AA---CGCAGCT | 416 |
| C50 Cat1   | AA---CGCAGCT | 416 |
| C20 Cat1   | AA---CGCAGCT | 417 |
| C23 Cat1   | AA---CGCAGCT | 417 |
| C66 Cat1   | AA---CGCAGCT | 417 |
| C68 Cat1   | AA---CGCAGCT | 417 |
| 107        | AA---CGCACCT | 415 |
| C48 Cat1   | AA---CGCAGCT | 416 |
| C62 Cat1   | AA---CGCAGCT | 417 |
| C24 Cat1   | AA---CGCAGCT | 413 |
| C12 Cat1   | AA---CGCAGCT | 414 |
| C1 Cat1    | AA---CGCAGCT | 414 |
| C29 Cat1   | AA---CGCAGCT | 412 |
| C42 Cat1   | AA---CGCAGCT | 415 |
| C9 Cat1    | AA---CGCAGCT | 424 |
| C51 Cat1   | AA---CGCAGCT | 423 |
| C3 Cat6    | AA---CACAACT | 425 |
| C15 Cat6   | AC---CATAACT | 427 |
| C6 Cat7    | ACGATCACAACT | 433 |
| C34 Cat7   | AACACCGCTACT | 436 |
| C55 Cat6   | AA---CGCAGCT | 441 |
| C31 Cat6   | AA---CCCAGCT | 438 |
| C53 Cat6   | AA---CGCAGCT | 436 |
| C33 Cat7   | AA---CGCAGCT | 430 |

Table 11 (continued)

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|            |               |     |
|------------|---------------|-----|
| C40 Cat6   | AA---CGCAGCT  | 427 |
| C2 Cat6    | AA---CGCAGCT  | 430 |
| C50 Cat6   | AA---CGCAGCT  | 428 |
| C49 Cat6   | AA---CGCAGCT  | 437 |
| C13 Cat6   | AA---CGCAGCT  | 433 |
| C20 Cat6   | AA---CGCAGCT  | 439 |
| C10 Cat7   | AA---CGCAGCT  | 439 |
| C16 Cat7   | AA---CGCAGCT  | 440 |
| C26 Cat7   | AA---CGCAGCT  | 442 |
| C6 Cat6    | AA---CGCAGCT  | 429 |
| C24 Cat6   | AA---CGCAGCT  | 428 |
| C11 Cat6   | AA---CGCAGCT  | 441 |
| C58 Cat6   | AA---CGCAGCT  | 437 |
| C28 Cat6   | AA---CGCAGCT  | 437 |
| C62 Cat6   | AA---CGCAGCT  | 436 |
| C61 Cat6   | AA---CGCAGCT  | 439 |
| C64 Cat6   | AA---CGCAGCT  | 436 |
| C23 Cat6   | AA---CGCAGCT  | 435 |
| C63 Cat6   | AA---CGCAGCT  | 438 |
| C2 Cat7    | AA---CGCAGCT  | 434 |
| C37 Cat6   | AA---CGCAGCT  | 435 |
| C1 Cat6    | AA---CGCAGCT  | 436 |
| C21 Cat6   | AA---CGCAGCT  | 435 |
| C54 Cat6   | AA---CGCAGCT  | 439 |
| C28 Cat7   | AA---CGCAGCT  | 438 |
| C38 Cat6   | AA---CGCAGCT  | 438 |
| AY621472Bp | AA---CGCAGCT  | 437 |
| C7 Cat6    | AA---CGCAGCT  | 436 |
| C35 Cat6   | AA---CGCAGCT  | 436 |
| AY621469Bp | AA---CGCAGCT  | 437 |
| C19 Cat7   | GAA---GGCAGCT | 439 |
| C34 Cat6   | -AA---GGCAGCT | 438 |
| C10 Cat6   | -AA---CGCAGCT | 423 |
| C51 Cat7   | -AA---CGCAGCT | 437 |
| C9 Cat6    | -AA---CGCAGCT | 438 |
| C55 Cat7   | -AA---CGCAGCT | 425 |
| C8 Cat7    | -AA---CGCAGCT | 433 |
| C47 Cat7   | -AA---CGCAGCT | 428 |
| C49 Cat7   | -AA---CGCAGCT | 428 |
| C45 Cat6   | -AA---CGCAGCT | 438 |
| C48 Cat6   | -AA---CGCAGCT | 436 |
| C57 Cat7   | -AA---CGCAGCT | 439 |
| C46 Cat7   | -AA---CGCAGCT | 441 |
| C12 Cat6   | -AA---CGCAGCT | 422 |
| C48 Cat7   | -AA---CGCAGCT | 423 |
| C46 Cat6   | -AA---CGCAGCT | 425 |
| C19 Cat6   | AA---CGCAGCT  | 437 |
| C43 Cat7   | AA---CGCAGCT  | 436 |
| C43 Cat6   | AA---CGCAGCT  | 424 |
| C56 Cat7   | AA---CGCAGCT  | 432 |
| C38 Cat7   | AA---CGCAGCT  | 432 |
| C32 Cat6   | AA---CGCAGCT  | 433 |
| C47 Cat6   | AA---CGCAGCT  | 435 |
| AY621470Bp | AA---CGCAGCT  | 434 |
| C33 Cat6   | AA---CGCAGCT  | 434 |
| AY621471Bp | AA---CGCAGCT  | 436 |
| C41 Cat6   | AA---CGCAGCT  | 424 |
| C51 Cat6   | AA---CGCAGCT  | 436 |
| C65 Cat6   | AA---CGCAGCT  | 435 |
| C18 Cat6   | AA---CGCAGCT  | 426 |
| C14 Cat7   | AA---CGCAGCT  | 424 |
| C17 Cat7   | AA---CGCAGCT  | 431 |
| C7 Cat7    | AA---CGCAGCT  | 432 |
| C25 Cat6   | AA---CGCAGCT  | 434 |
| C39 Cat7   | AA---CGCAGCT  | 440 |

Table 11 (continued)

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|            |      |              |     |
|------------|------|--------------|-----|
| C29        | Cat6 | AA---CGCAGCT | 424 |
| C22        | Cat6 | AA---CGCAGCT | 425 |
| C58        | Cat7 | AA---CGCAGCT | 428 |
| C27        | Cat6 | AA---CGCAGCT | 422 |
| C46        | Cat5 | AA---CGCAGCT | 422 |
| C36        | Cat7 | AA---CGCAGCT | 422 |
| C37        | Cat7 | AA---CGCAGCT | 426 |
| C25        | Cat7 | AA---CGCAGCT | 424 |
| C42        | Cat7 | AA---CGCAGCT | 425 |
| C29        | Cat7 | AA---CGCAGCT | 425 |
| C32        | Cat7 | AA---CGCAGCT | 425 |
| C1         | Cat7 | AA---CGCAGCT | 425 |
| C31        | Cat7 | AA---CGCAGCT | 425 |
| C44        | Cat7 | AA---CGCAGTT | 428 |
| C28        | Cat5 | ACAAGGGAAGC- | 436 |
| C64        | Cat1 | AAACTGATCAAT | 442 |
| C66        | Cat6 | AA---TTCAATC | 444 |
| AF217800Di |      | -----        |     |
| C2         | Cat5 | GCTCCTAATA-- | 442 |
| C10        | Cat5 | GCTCCTATTA-- | 442 |

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Table 13 Nucleotide sequence data of 242 clones of *Brugia* spp. ITS2 region from cat reservoirs.

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACACTAAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C2 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT     |
| C3 Cat1 | TAAAAGTAATAAGTGTATGCGCAGAGATTTATATTTATTATTCTCAAATAATTTGTGTGT<br>GTGTGTTAAAGAGTTTTTTTTGGTGATAGTGAGTGAAAGAGGTGTGTGTCTCAGTGATGA<br>GATACAAAACGTCTCGGGTGTTTTTGTCACAGAGAGAGTGAGAGTGAAAATATCTCAAAA<br>TATATCCCGTGATATGTTATAATAGATGTGTGTAATTTTTTTACTTTTTTTCACATAGAG<br>AATATATATGTATGTGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT   |
| C4 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATACATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAACCTTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT    |
| C5 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br>TGAATAATAAAGAAAGATTACTATTATTTATTTATTATGCATTGATTGACTTTATTGATT<br>GTTTGTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGATTCAATCATATAA<br>ACAAATAAATAAGGTAAAGAAATTAGCTTATATATATGAATGATAGTTTCAATATGTATGA<br>TATCAATT |

Table 13 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C6 Cat1  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAAT<br/> AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTT<br/> TGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAACAAATAA<br/> ATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT</p>       |
| C8 Cat1  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAATA<br/> AGAAAGATTACAATTATTTATTTATTATGCATTGATTTATTTTATTGTTTGTTTGTTTG<br/> TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAACAAATAAAT<br/> AAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT</p>           |
| C9 Cat1  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAATA<br/> AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTG<br/> TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAACAAATAAAT<br/> AAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT</p>           |
| C10 Cat1 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br/> AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br/> TTGTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATA<br/> TCATTT</p> |
| C11 Cat1 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAATA<br/> ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTG<br/> TTGTTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br/> AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br/> TT</p>  |

Table 13 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C12 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTCGAAACATTAATAAACA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C14 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTAATATTTATTATTATCAAATAATTATGGTTT<br>GTTGGTGAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGTTTG<br>GATACAAAATGCCTCAGGGGATTTAGTAACAGAGAGAGTGAGAATGATAAAATCTCAAAA<br>TAAATCCCCTGATAGGTAATAATAGATATGAGTAATATTTTTGCCTTATTTAGCATATGG<br>AATATATATGTATATATATATATTAATAAGTAATCTTTCAGGAATAATTAATAAGGAAGG<br>ATTCCAATTATTTATTTATTAGGCATGGATTTACTTTATTGTTTGTTGTTGTTGGTGTTA<br>AATGTTTCAAATTAATAATGCAAGTTATTTGACACTTTAAATACACAAATAAATGGGGTA<br>AAAAATTCGCATATATATATGAATGATAATTTCAATATGTTATATCTCATTT                |
| C15 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAATAA<br>AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTG<br>TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAACAATAAAT<br>AAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT                |
| C16 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATATATATTAATAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGCTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTA<br>TATCATTT |
| C17 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATTAAGAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTG<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAACAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT        |

Table 13 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C19 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                             |
| C20 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAACTCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTGTATATATATATATATATTAATAAGTTATCTTTCATGAATAAATAATAA<br>AGAAAGATTACAATTATTTATTTATTACGCAGTGATTTACTTTATTGTTTGTTTGTTTG<br>TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGACACATTAAATAAAACAAATAAAT<br>AAGGTAAAAAATTCGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT                                        |
| C21 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGCTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                               |
| C22 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT                             |
| C23 Cat1 | >Cat1C23<br>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTAAGAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTAGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTAATAAGTAATCTTTC<br>TGAATAAATATTCATAAATAATAAAGAAAGATTACAATTATTCATTTATTATGCATTGAT<br>TTACTTTACTGTTTGTTTGTTTCGTTGTTTAAATGTTTCAAATTAATAATGCAAGTTGTTTG<br>AAACATTAAATAAAACAAACGAATAAAGGAAAAAATTAGCATATATGTGAATGACAATTT<br>CAATATGTTTTACATCATTT |

Table 13 (continued)

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| C24 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGGTATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATGTGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT     |
| C25 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTGTATATATATATATATATATATATTAATAAGTAATCTTTCATG<br>AATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTT<br>TATATCATTT |
| C26 Cat1 | TAAAAGTAGTAATTGCATTGGCATAGATTTATATTTATTAATATCAAATAATTTGTGTGT<br>GTTAGTGAAAAAGAGTATTTGATGATAGAGAATGAAAGAAGGTGTTTGAGTCAAGGTTTA<br>GATACAAAATGGTCTGGTGTTTTAGTGAGAGAGAGAGTGAGAATGTAAAAATCTCAATC<br>TCAATCCCAGGATAAGTAGTAATGGGTAAGAGTAATATTTTTACCTTATTTAACATATTG<br>AATGTATATGTATATGTATATATATATATTAATAAGTAATCTTTCATGAATAAATAATAA<br>AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTTG<br>TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAAAT<br>AAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT                |
| C27 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATA<br>TCATTT     |
| C28 Cat1 | AAAGAGTAAGCATTGAATTAGCATTGATTTATACAAATAATTATCGAATGATTGTTGTTA<br>GGTTGTTTAGAAGATTATGAGTGGATAAAGATGGAAGAATGATGGTTGAGTCACTGATTG<br>GATCCGGAGTGCTTCTGGCGGTGTGGGTGCGGAGGGAGTGAGCTCGAAATAATTTCCAAG<br>TTAATTCCTTGTTGAGTTGTGTTAGATTTGTGCAATATTTTTCTTTAGTTTACATATGG<br>AATAGATTAGTTTTAGTTTTTTTTTTTTATTTTTTAAAGGTATTTTTCTGGATTAAATTA<br>TTAAGGAAGGTTTCCATTTATTTTTTTTTTAGCCATGGATTTACTTAATGGTTGGTTGGT<br>TTGGTGGTAAAAGGTTTCAAATTAAGCCAGGTTTTTGAACCTTTAAATTAACCAATT<br>AATTAGGGTAAAAATTTGCCATATTTTTTGGATGGTAAATTCAAAAGGTTTAAATCCAT<br>TT            |

Table 13 (continued)

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| C29 Cat1 | TAAAAGTAATAATTGTATTTCGCATTGATTGATATTTATTATTATCAAATAATTTTGT<br>TTTTGTTAAAAAGATTATTTGAGGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTGTATATATATATATATATATATATATATTTAAAAAGTAATCTTTCATG<br>AATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTT<br>TATATCATTT          |
| C30 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br>TTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>GTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT                      |
| C31 Cat1 | TAAAAGTAATAAGTGTATTTGCATAGATTTATATTTATTATTATCAAATAATTTTGT<br>TTTTGTTAAAAAGATTATTTGATGATAATGAAGGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATATATATATATATTTAAAAAG<br>TAATCTTTCATGAATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTG<br>AAACATTAAATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAAT<br>TTCAATATGTTTTATATCATTT |
| C32 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br>TTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTTAAAAAGTGATCTTCTCGAGTAAA<br>TATTAAGAGAGAGTTCACCTTTTTTATTTATTATGCACAGAGTTACTTTATAGTGTGTGT<br>GTGTTGTGGTGAAAAGTGCAAATTTAAATGCAAGTTTTTTGTGACACTTTAATATACAC<br>ATAAATATGGTGTAATAATTAGCACATATATATGAGTGATAATTTCAATATGTGTTATATC<br>ACAT                    |
| C33 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br>TTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAATAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTGT<br>TTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                       |

Table 13 (continued)

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| C35 Cat1 | TAAAAGTAATAATAGTGTGTTGCGCTGAGTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTGTGTGAAAAAGAGTATTTGAGGATATTGAGTGAAAAAGAGGAGTGAGTCACTGATTA<br>GATACAAAATGCGTCTGGTGAGTTTGTGTCAGAGAGAGTGAGAGTGAAAAATCTCTAAA<br>TAAATCTCCCGATAAGTGATAATAGATATGAGTAATATTTTTCTTTATTTAACATATTG<br>AGTATATATGTGTATGTATATATATATATATATATTAAGTAATCTTTCATGAATAAA<br>TAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAATAAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT             |
| C38 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAAGTAATCTTTCATGAATAAATA<br>ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAATAAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT               |
| C39 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAGTGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATTAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTGTG<br>TGTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAATAAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATT                    |
| C40 Cat1 | TAAAAGTAATAATAGTATTTGCAGCGATTTATATTTATTATTATCAAATAATTATTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATGGAATCAATGATTA<br>GATGCAAAATGCATCAGGTGATTTGTAAACAGCGAGAGGGGAAGGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTCTTCATTTTACATCTTG<br>AATATATATGTATATATATATATATATATATATTAAGTAATCTTTCATGAATAAATA<br>ATAAGAAGGATGACAATTATTTATTTATTATGCAGCGATTTACTTTATTGTTGGTTTGT<br>TTTGTCGTTAAATGTTTCAAATTAATGCAAGTTGTTTGAAGCATTAATAAATCAACT<br>AAATAAGGTAGAAAATTAGCATCTATATATGAAGGATAATTTCAATATGTTGTATATCAT<br>CT                  |
| C42 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTAAGATTATTTGA<br>TGATGATGAATGAAAAAGGATGATTGAATCAATGATTAGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTAAGTAATCTTTCAT<br>TGAATAAATATTCATAAATAATAAGAAAGATTACAATTATTCATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTGTTTGTGTTTGAAGTGTTCAAATTAATGCAAGTTGTTTGA<br>AAACATTAATAAAACAAACGAATAAAGGAAGAAATTAGCATATATGTGAATGACAATTT<br>CAATATGTTTTATATCATT |

Table 13 (continued)

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| C43 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATAAATGTATACTTTTCATGAATA<br>AATTCTTTTCGAGAGATTACAATTATTTATCAATTATGCATTGATTTACTTTATTGTTGGT<br>TTGTTTTGTTGTTAAATGGTTCAAATTTAAATGGAAGTTATTTGAAACGTTAGAATATAC<br>AAATATTTAAGGTAAAAAATTAACATAGATATATGAATGATAATTTCTATAAGTGATATA<br>TCCTTT |
| C44 Cat1 | TAAAAGTAATAATTGTATTGGCATTGATTTATATTTATTATTATCAAATAATCCTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTCTTTAACATATTG<br>AATATATATGTATATGTATATATGTATATATATATATATATTAAGTAATCTTTTCACG<br>CATAAATAATAAGAAAGATTACAATTATTTATTTTTATGCATTGATTTACTTTACTGT<br>TTGTTTGTTTTGTTGTTCAATGTTTCAATTTACATGCAAGTCATTGGTGTCGTTACACT<br>CAACTAATCAATAAGGTAAGGAATTAGCATATATATAAGAGGGAGAATTTCAATATGTTT<br>TATATCATT |
| C45 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>CATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATTAAGTAATCTTTTCATGAATAAATAATAAAG<br>AAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTGTT<br>GTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAACAAATAAATAA<br>GGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATT                 |
| C46 Cat1 | TAAAAGTAATAAATAAATGTGCATTGATTGATATTTATTATTATCAATCAAATATTGTTT<br>GTTTGTTAAAAAGAATGTTTGATGATAATTAATGAAAAAGATGATTGAATCAATGATTG<br>GATACAAAATACATCCGTCGATTTAGTTACTGAGAGAGTGAGAGTGAAAAATCTCTATC<br>TAAATCCCTTGCTAGGTAATTATTGATAGGTGTGATATTTTTCTTTCTTTAACTTACAG<br>AATGTATATGTATGTGTATATATATATATATATATATTAAGTAATCTTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTA<br>TATCATT     |
| C49 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATCTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAAGTAATCTTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATA<br>TCATT      |

Table 13 (continued)

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| C50 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAAACAA<br>ATAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT                   |
| C52 Cat1 | TAAAAGTAACAACCTGCACTTGCGCACGATTTATATCAACTATCATCCCTCATTTCTGTTC<br>GTTAGCCAAAATGCATCCACCCTGATGATAATGAATGAATTATGATGATAGTACCAATGA<br>TTATATACAACCTTGCTTCGGGTGCATTTATTTATCATATATAGTGATAATGAAAAATCT<br>CCGAATAAATCCCCTTGATAATTCATATTAGTATATGAGTAATATTTTTACCTTCTTTA<br>ACATATTGAATATATATGTATATGTATATATATATACATATTAATAAATAATCTTCTCCG<br>ACTAATTACCCCCAAATACAACAATTATTTATTAATCATGCATTGACTTTCCTCCATTG<br>TTTGATTAGTTATCATGAAAATGTTTTCAAATCAACCTGCAAGTTATCTTGTACCATTAG<br>TATCATCAAACATAATGCCGTAAAATCACTATAATTTAATGCACTAAATGCATACCTTCG<br>TTATGCTTTTATATTCCTA |
| C53 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                    |
| C54 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTTCCTCTCTCGTGAATAAA<br>TTATAGAGAGAGATCACTATTATTTATTTAATACGCAGAGATTCACTATAGTGTGTGTGT<br>GTTGTGGTGAAAAGTGTCACAAATTAATGTGCGTGTTATTTGACACTTAAATATACACAT<br>ATATATGGGGTAAATTTTTCGCATATATATGAGAGTGATAATCTCAATATGTTTATATATC<br>ATTT               |
| C55 Cat1 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                    |

Table 13 (continued)

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| C56 Cat1 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br/> TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> GTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAA<br/> ATAAATAAGGTAAAAAATTAGTATATATATATGAATGATAATTTCAATATGTTTATATC<br/> ATTT</p>       |
| C57 Cat1 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAAT<br/> AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br/> TGTGTTAAATGTTTCAAATTATAATGCAAGTTATTTGAAACATTAAATAAACAAATAA<br/> ATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTATATCATT</p>                    |
| C58 Cat1 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTAAAAAGATTATTTGATGATAATGAATGAAACAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATG<br/> AATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br/> TTGTTTGTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAAT<br/> AAACAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTT<br/> TATATCATT</p> |
| C59 Cat1 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br/> TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> GTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAA<br/> ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTATATC<br/> ATTT</p>         |
| C1 Cat2  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAAAGAAAGAT<br/> TACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTATTTGTTTGTGTTTAAA<br/> TGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAAAGGTAAA<br/> AAATTAGCATATATATATGAATGATAATTTCAATATGTTTAATCATGT</p>                                 |

Table 13 (continued)

Table 13 (continued)

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| C7 Cat2  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATATATTAATAAGTAATCTTTCATGAA<br/> TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTAA<br/> TCATGT</p>           |
| C8 Cat2  | <p>TAAAAGTAATACTTGTATTTGCATTGATTTATATCTAATATTATCAAATAATTTGTGTAA<br/> GTGTGTTAAAAAGATTATTGGATGATAAAGAATGAAAAAGATGAGTGAATCAACGATTA<br/> GATTCAGAATGCATCAGGTGAGTTAGTAACAGAGAGAGTGAGTATGAAAAATCTCACAA<br/> TAAATCTCATGATAAGTAATAATAGATTTGTGTCATATTTTTACCTTATTTAACATTTTG<br/> AATATGTATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAATA<br/> ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br/> TTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br/> AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTATATCATTT</p>                        |
| C9 Cat2  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCGTTT<br/> GTTTGTTGAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAA<br/> TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTAA<br/> TCATTT</p>              |
| C10 Cat2 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATATACATATATATATTAATAAG<br/> TAATCTTTCATGAATAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGAT<br/> TTACTTTATTGTTTGTTTGTTTGTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTG<br/> AAACATTAAATAAACAAATAAAAAAGGTAAAAAATTAGCATATATATATGAATGATAATT<br/> TCAATATTTTTAATCATGG</p> |
| C11 Cat2 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAATA<br/> ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTACTGTTTGTTTGT<br/> TTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br/> AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTAATCATTT</p>                         |

Table 13 (continued)

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| C12 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATTA AAAAGTAATCTTTCATG<br>AATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTA<br>TATCATTT      |
| C13 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTATATC<br>ATTT     |
| C14 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATCA AAAAGTAATCTTTCAT<br>TGAATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTGTTTGTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTT<br>TTATATCATTT |
| C15 Cat2 | GACATCTAATAAAAGTATTTGCATTGATTTCTATTTATTTTAATCATATCCAGTTAATTT<br>GTGTGTGTAAGAGATAGATGTGTTATGATGAATGTAAAGAGAAGATTGGTCAGATGAT<br>TCGATACATACCGCATCACTTCATTTGGTATCTTAGCGGGGGGGAGGGAAAGATTACAT<br>CTCAAATAACCTCCCTAAGTAATGTATAGGTATGAGGGATGTTTTTCTCCTTCCTTAT<br>ATTGAATGTGTATGTGTGTGTGTATATATATATATATATATATTA AAAAGTGTTTTTT<br>CTCGGTAAATATAAAAAGGAGGGTTCCACATTTTTTTTTTTTTGCGCGTGAGTTTCC<br>TTATATTGTTTGTGTTTGTGTTGAAATTTACAGAATTAACCGCAGTTTTTGGCCCT<br>TTTACCCTCAAAGGTATGTGGGAAAAATTTCCCATATATATGGAAGTGATATTTTCA<br>ATGTTTTATTCTTTTC          |
| C16 Cat2 | TAAAAGTAATAATTGTATGTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCTTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTAA<br>TCATTT          |

Table 13 (continued)

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| C17 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                      |
| C18 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGCTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTATATC<br>ATGT                 |
| C19 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATATATATATATTA AAAAGTAATCTTTCAT<br>TGAATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTGTTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGT<br>TNATATCATT            |
| C20 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATATATATATTA AAAA<br>AGTAATCTTTCATGAATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTG<br>ATTTACTTTATTGTTTGTGTTTGTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATT<br>TGAAACATTA AAATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATA<br>ATTTCAATATTTTATATCATT |
| C21 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTNAT<br>ATCATT             |

Table 13 (continued)

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| C22 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATATTAATAAGTAATCTTTCA<br>TGAATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTGTTTGTGTTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTT<br>TTAATCATTT  |
| C23 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATTAATAAGTAATCTTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTAA<br>TCATTT  |
| C25 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTTCATGAATAAATA<br>ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGT<br>TTTGTGTTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTATATCATTTG         |
| C26 Cat2 | TAAAAGTAATAATGGTATTCGCATTGATTTATATTTATTATTATCAAATAATTTGTGTTT<br>GTGTGTTAAAAAGATTATTGGATGATAATGAATGAAAAAGATGAGTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATGG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTTCAGGAATAAATA<br>ATAAGAAAGATTACAATTATTTATTTATTAGGCAGGGATTTACTTTATGGTTTGTGTTTGT<br>TTGGGTGTTAAAGGTTTCAAATTAATAATGCAAGTTATTGAAACATTAAATAAACAAAT<br>AAATAGGGTAAAAAATTGGCATATATATGGAAGTGATAATTTCAATATGTTGTATATCAT<br>TT     |
| C27 Cat2 | TAAAAGTAATAGTAGTATCAGCAATGATTTATATTTATTATCATCAAATAATTGTTGGTT<br>GGTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGGTTGAATCAATGAGTA<br>GCTACAAAATGCATCAGGTGATTTAGCAGCGGGGGGGGGGAGAATGAAATAATCTCAAAA<br>TTAATCCCCTGATAAGTAATAATAGATAGGAGTAATATTTCTACCTTATTCAACATGTTG<br>AATATAGATGTAGATGTATATATATATATATATATATATTAATAAGGTATTCTTTTCAGGAA<br>TAATTAATAAGGAAGGATTCCAATTATTTATTTATTAGGCATGGATTTACTTTATGGTTG<br>GTTGGTTTGGTGGTTAAAGGTTTCAAATTAATAAGGCAAGTTTTTGAACCTTTAAATTA<br>CCAATTAATTAGGGTAAAAAATTGGCATATATATAGGAAGGATAATTCCAATAGGTTTAT<br>ATCATTT |

Table 13 (continued)

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| C28 Cat2 | AATAAGAAGTAATAGTAGTAGCAGCGATGAATATTTTTATTATCATCAAATATTTGTTG<br>GTTGGTTGAAAAGATGATTTGTTGATGATGAAGAAAAAAGAGGATGGAAGCATCGATGA<br>GATGCAACAAGCATCATCTGGTTTTGTAGCAGCGGGGGGGGGAGGAAAAAATATTCTAA<br>AAAATCCCCCATAAGTAGTAATAGATGTGAGGAGTATTTTTCTCTTTTTCATCTTG<br>AAGAAATAAGTAGAAGTAGATATATATATAAAAAATTTATATTTAAAAGTTATTTTTCTG<br>GATTAATTATAAAGGAAGGTTTCCATTTTTATTTATTAAGCCATGATTTACCTTAATGG<br>TTGTTTGGTTTGGTGGTAAAAGGTTCAAATAAAAAAGCCAGGTTTTGGAACCTTTAAAT<br>TAACCAATTAATTAGGGTAAAAATTTGCCTATATATGGAGAGGAAAAATTCCAAAGTTT<br>ATTCATGGTT         |
| C29 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTGT<br>TTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATATGAATGATAATTTCAATATTTTATATCAT<br>TT      |
| C30 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTGT<br>TTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATATGAATGATAATTTCAATATTTTATATCATTT          |
| C31 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAGTAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGGTATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATATGAATGATAATTTCAATATTTTATATCAT<br>TT   |
| C32 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATATCATATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGAATATTTGATGATAATGAAAGAAAAAAGATGTTAGTATCACAGTTTA<br>GATACAAAATGCATCTCGTGTTTTATTAACAGAGAGAGTGAGAATAAAAAAATCTCAAAA<br>TAAATCCCCCGATAAGTAATAATAGATATGAGTATTATTTTTACCTTATTTAACATATTG<br>AAAATATATGTGTATGTGTATATATATATATATATATAAAAAAATGTTCTCTCTCAAGA<br>ATAAATAAAAAAGAAAGTTCCCATTTTTTTTTTACACCGCATTGATTTACTTTATTGTT<br>TTGTTTGTGTTTGTGAAATATGTTACAAATAAAAAACCCATTTTTTCGCCCTCTTTAAAA<br>TACCCAAATAATTAGGGTAAAAATTTCCCATATATATAGGAAAGATATTTACATNTGTT<br>TTTATCTTTTT |

Table 13 (continued)

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| C33 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTATATC<br>ATTT      |
| C34 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATTAATAAGTAATCTTTC<br>TGAATAAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTT<br>TATATCATTT        |
| C35 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTAAATCA<br>TTT      |
| C36 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTAAATCATTT       |
| C37 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATTAATAAGTAATCTTTC<br>TGAATAAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTTTGTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGT<br>TNATATCATTT |

Table 13 (continued)

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| C38 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTAA<br>TCATT  |
| C40 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTT<br>TGTGTTAAATGTTTCAAATTGAAATGCAAGTTATTTGAAACATTAAATAAACAATAA<br>ATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTATATCATT          |
| C41 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTATATCAT<br>GT    |
| C42 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTATATC<br>ATTT |
| C43 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTTAATC<br>ATTT  |

Table 13 (continued)

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| C45 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATTTAAAAAGTAATCTTTCATG<br>AATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTA<br>TATCATTT   |
| C46 Cat2 | TAAAAGTACCAATTGTATTTGCATTGATTCATATTTATTATTGTCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGCCTATTTGATGATTATGAATGAAAAAGATGATTGAATCAGTGATTA<br>GATGCAAAATGCATCAGGTGATTTAGTTACAGGGAGAGTGAGAATGACAAAATCTCTAAA<br>TAACTCCCCTGATAGGTAGTAATAGATATGAGTAATATTTTTATCCCTATTTAACATATT<br>GAATATATATGTCTATGTACATATATATATATATATATATATGTTAAAAAGTAATCTTTC<br>ATGAATAAATAATTATGTCATGATTACAATTAATTAATATTCTGCATTTATTTACTTTA<br>CAGTGAGTTTGTTTTGTTGTTAAATGTTTCAAGTTAAATTTCAAGTTATTTGACACGTTA<br>TTTTAAACCACATAATTAACGTAAAATTTGGCATATATTTGCAATGATAATACAAAAGAT<br>TTCATATTTTTT |
| C48 Cat2 | TAAAAGTGTTATTAGAAATGGCATTGATTATGATTATGAAATCAAATAGTTTTAGTGTG<br>TTTGTTAAAAAGATTCTTTGATGATACTGAATGAAAAAGTTGCTTGAATCAATGATTAG<br>ATACAAAATGCCTCAGGTGACTCGCTAACAGAGAGAGTGAGAAGGTAATAATTTCTAAAT<br>TAATCCCTAGTTAAGTAATTTTAGATATGTGTATTATTTTTACATTATTTAACTTTATGA<br>ATATATTTCGTATACGCGTTATTTTTCATGATATAAAGTATTCTTTCATGAATAACATAAT<br>AATGAAGAGATTACAACATTTATTTTATTATGCAGTGATTTACTTTATTGTTTGTTGGTT<br>TTGTTGTTAAAAAGTTTCAAATTTAAAGGCAGCGTTACTTCTGAAGCATCTATAATATAAC<br>AGCTAATTAGGGGCATAAATTAGCATATAAATATGAAGGAGAATTCCATGATTTTTTTAA<br>CTCTT      |
| C49 Cat2 | TAAAAATTGTAATTGCATTGGCTTTTTATTTATAATTATTTAAATCAAATAGTTTGTGTGT<br>GTAAGTGAAAAATGATTATTTGATGATAATGAATGAAAAATATGATTGAATCAAGGTTTA<br>GATACAAAATGCGTCAGGTGATTTAGTAGCGGGGAGAGTGAGAATGAAATAATCTCAAAA<br>ATAAATCCCAAGTTAAGTAATAATTGAGATGTGTATTTTTTTTTCCCTTATTTAACGAATT<br>GGATTAGATAGGGATATGGTTATTATAAATTTAATAAGTAATCTTTCATGGAATAATAA<br>ATAAAGAAGGATTACAACATTTATTTTATTATGCATCGATTTACTTTATTGTTTGTTGGT<br>TTTGTTGTTAAAAAGTTTCAAATTTAAATGCAAGTTATTTGGAACATCAAATAATCAACT<br>AATTAAGGTAAAAAATTAGCATCTTTATATGAATGATAATTTCAAGAAGTTTTATCATCT<br>TT        |
| C50 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTAATCATTT               |

Table 13 (continued)

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| C51 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATATATATATATATATATATATATATATATTAATAAGTAATCTTTCAGGAATAAATA<br>ATAAGGAAAGATTACAATTATTTATTTATTAGGCATGGATTTACTTTATGGTTGGTTGGT<br>TTGGTGGTTAAAGGTTTCAAATTAAGGCAAGTTATTGGAAACATTAAATAAACAAAT<br>AAATAGGGTAAAAAATTGGCATATATATGTGAAGTGATAATTTCAATATGTTTATATCAT<br>TT                      |
| C52 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAAGTGAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATTTTATA<br>TCATGT                       |
| C55 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCCATAATTTTTGCTTG<br>CTTGTTAAAAAGATTATTTGATGATTATGGATGAAAAAGATGATTGAATCCATGATTAG<br>ATACCAAATGCCTCCGGTGATTTAGTAACAGACAGAGTGAGAATGAAAAATCTCTCCAT<br>TAATCCCCTGATCAGTAATAATAGATATTAGTAATATTTTTACCTTATCTAACCCATTGA<br>ATATCTATCGGTCTACATATATCTCTTAATAAGGCATCTTTCATGAATGCATATTCCTGC<br>CATGATCCCGTAAAGATCACATCATGTTCTCTTATTTACATATGAGACTACCACTCGA<br>TGACTGTGTTGTATCCCGTGCTCCAAAGTTGTTACATCTATAATGTCCAGTGTTTGCTT<br>CCCCTTTTGCTACACACCCCGAATAGAAAGAAAAGTAATAGGCATAATTTGTGGAATGAG<br>CGCTTCCCGCATGTGTCTATATTCACC |
| C56 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATTAATAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br>TGTTGTTAAATGTTTCAAATTAAGTGAAGTTATTTGAAACATTAAATAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT                                  |
| C57 Cat2 | TAACAGTAATAATTGTATATGCATAGAAAAAATTTATGATTATCAAATAAAAAAGAGTTT<br>GTGAGTTAAAAGGATTATTTGAGGTTAATGAATGAAAAATGAGGTTGGAATCACTTCTGG<br>GATTCAAAATGCATCGGGTGTGTTAGTGACAGAGTGTTGAGAATGTCACATTCTCAGTA<br>TTAATCGCTTGGTGAGTTATTTAGCTTTGTGTAATATTTGACTTTATTTGACTTTGTG<br>AATATATATGTATATATATATATATATGTATTAATCGTGATTTTTCATTAATAAATAAT<br>AAAGAAAGATTACAATTATTCATTTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br>CGTTGTTAAATGTTTCAAATTAAGTGAAGTTGTTTGAACATTAAATAAACAAACGA<br>GTAAAGGAAAAAATTAGCATATATGTGAATGACAATTTCAATATGTTTTATATCATTT                                       |

Table 13 (continued)

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| C58 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATTTAAAAAGTAATCTTTCATG<br>AATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGTAATTTCAATATGTTTT<br>ATATCATTT     |
| C59 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATGTATATATATTTAAAAAGTAATCTTTCATGAATA<br>AATAAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATA<br>TCATTT     |
| C60 Cat2 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATCTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br>GTTTTGTTGTTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT     |
| C1 Cat3  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATATTTAAAAAGTAATCTTTCAT<br>TGAATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGT<br>TTTATATCATTT |
| C2 Cat3  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTA<br>TATCATTT    |

Table 13 (continued)

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| C3 Cat3 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTA AAAATGCAAGTTATTTGAAACATTA AAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT                                                                 |
| C4 Cat3 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACGGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTA AAAATGCAAGTTATTTGAAACATTA AAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT                                                                 |
| C5 Cat3 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATGTATATATATATATATATATTA AAAAGTAATCTTTCATG<br>AATAAATAATAAAGAAAGATTACAATTATTTATTTT AAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTA AAAATGCAAGTTATTTGAAACATTA AAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT |
| C6 Cat3 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATATATTA AAAAGTAATCTTTCGTAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTA AAAATGCAAGTTATTTGAAACATTA AAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAACATGTTTTATATCAT<br>TT                                                                  |
| C1 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAAATGCAAGTTATTTGAAACATTA AAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATA<br>TCATTT                                                              |

Table 13 (continued)

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| C2 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCAT<br>TT  |
| C3 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAATAAG<br>AAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTGTTT<br>GTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAAATAA<br>GGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT              |
| C4 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATAATAA<br>AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTG<br>TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAAAT<br>AAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT              |
| C5 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTA<br>TATCATTT |
| C6 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGACTTAGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATATATATGCATTGATTTACTTTATT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGT<br>TTTATATCATTT                                                           |

Table 13 (continued)

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| C7 Cat4 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATA<br>TCATTT |
| C1 Cat5 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br>TGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT              |
| C2 Cat5 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTGATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT |
| C3 Cat5 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAATAATAAGAA<br>AGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGTGTTTGT<br>TAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAAATAAGG<br>TAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT              |
| C4 Cat5 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAATAATAA<br>AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGTGTTT<br>TTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAATAAATAAGG<br>TAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATTT           |

Table 13 (continued)

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| C5 Cat5 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAATAATAAG<br/> AAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTGTT<br/> GTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACAAATAAATAA<br/> GGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATCATT</p>                  |
| C6 Cat5 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br/> TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTA<br/> TATCATT</p>   |
| C7 Cat5 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATATATATGTATATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br/> TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTA<br/> TATCATT</p> |
| C1 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTTAAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATT<br/> AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAGTGAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAAT<br/> AAATAGTAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br/> TTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br/> CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br/> CATT</p>    |
| C1 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTTTAAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br/> TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br/> TCATT</p>  |

Table 13 (continued)

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| C3 Cat6 | TATAAGTAATAATTGTATATGCATTGATTTATATTTATTTTAAATCAAATAATGTTTGTTT<br>GTTTGTATGAAAGATTATTGGAGGAGGATGAATGAAAAAGGATGATTGAATCATTGATTA<br>GATACAAAATGCGTCGGGTGATTTCTAACAGAGTGAGTGTGAATGAATATCTCTCTAAAT<br>AACTCGCTTGGTAAGTAATAATAGGTGTGAGTAATATTTTTCTTTATTTAACATATTGA<br>ATAATATGTATGTATGTATATATATATATATATATTAATAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT                       |
| C4 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTAATCAATGATTAG<br>ATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAATA<br>AATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGAA<br>TAATATATATGTATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATAA<br>ATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTT<br>TGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAAACA<br>AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCA<br>TTT                   |
| C5 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATTAATAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTT<br>TGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAATAAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT                            |
| C6 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATATATTAATAAGTAATCTTTCAT<br>TAAATAAATAATAAAGAAAGATTACAATTATTTATTTAATATGCATTGATTTACTTTATT<br>GTTTGTTTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTA<br>ATAAACAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTT<br>TATATCATTT               |
| C7 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTATGCAAATAATTTTTGTTTGTTTGTTTAAAAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTGGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTAATAAGTAATCTTTCAT<br>TGAATAAATATTCATAAATAATAAAGAAAGATTACAATTATTTCAATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTTGTTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTA<br>AAACATTAATAAACAACGAATAAAGGAAAAAATTAGCATATATGTGGATGATAATTT<br>CAATATGTTTTATATCATTT |

Table 13 (continued)

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| C8 Cat6  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAATCCCCTGATAAGTAATAACAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATACGTTTTATATC<br>ATTT                        |
| C9 Cat6  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                       |
| C10 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT                     |
| C11 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAGATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGAA<br>TAATATATATGTATGTATATATAAATATATATATATATATATTA AAAAGTAATCTTTCATGA<br>ATAACAATAAAGAAAGATTACAATTATTTATTTATTATGCGTTGATTTACTTTATTGTT<br>TGTTTGTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATA<br>AACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTAT<br>ATCATTT                   |
| C12 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTGTTAAAAGATTATTTGA<br>TGATGATGAATGAAAAAAGATGATTGAATCAATGATTGGATACAAAATGTATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAGATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTA AAAAGTAATCTTTCATGA<br>TGAATAAATATTCATAAATAATAAAGAAAGATTACAATTATTTCAATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTGTTTCTGTTTCTGTTTAAATGTTTCAAATTA AAATGCAAGTTGTTT<br>AAACATTAAATAAACAACGAATAAAGGAAAAAATTAGCATATATGTGGATGATAATTT<br>CAATATGTTTTATATCATTT |

Table 13 (continued)

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| C13 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT |
| C14 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAGAGTAATCTTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C15 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C16 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C17 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTCGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATATATATATATATATATATTTAAAAAGTAATCTTTTCATGAATAAATAA<br>AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGT<br>TTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAAATAAACAAATAAAT<br>AAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT                   |

Table 13 (continued)

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| C18 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATTTAAAAAGTAATCTTTCATGAATAAATAATAA<br/> AGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGTGTTT<br/> TTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAACAAATAAAT<br/> AAGGTAAAAAATTAGCATATATGTGGATGATAATTTCAATATGTTTTATATCATT</p>             |
| C19 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATATGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAATA<br/> ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGT<br/> TTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAACAAAT<br/> AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT</p>              |
| C21 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br/> AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br/> TGAATCCCCTGATAAGTAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGAAT<br/> AATATATATGTATGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAATAAT<br/> AAAGAAAGGTTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGTGTT<br/> TGTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAACAAATAA<br/> ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT</p>           |
| C22 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAATAAT<br/> AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGTGTT<br/> TGTTGTGTTAAATGTTTCAAATCAAATGCAAGTTATTTGAAACATTAAATAAAACAAATAA<br/> ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT</p>         |
| C23 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br/> AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTT<br/> TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAAC<br/> AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p> |

Table 13 (continued)

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| C24 Cat6 | TAAAAGTAATATTTGCATTGGCATTGATTTATATTTATTATTATCAAATAATTTGTGTGT<br>GTTAGTGTAAGAGATTATTTGATGATGATGAATGAAAAAGGTGTTTGAGTCAATGTTTA<br>GATACAAAATGCATCTGGTGATTTGTAACAGAGAGAGTGAGAATGTATAAATCTCAATAT<br>CAATCTCATGATAAGTAATAATGGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATTAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTGTTT<br>TGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT          |
| C25 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATTAAGTAATCTTTCATGAATAAATA<br>ATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGCTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT            |
| C26 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATTAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT      |
| C27 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATTAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTGTTT<br>TGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT        |
| C28 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTAAGTAATCTTTCATG<br>AATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAACAAATAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTA<br>TATCATT |

Table 13 (continued)

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| C29 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATATATGTATGTATATATATATATATATATATTAATAAAGTAATCTTTCATGAA<br/> TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATATA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br/> TCATTT</p> |
| C30 Cat6 | <p>TATAAGTGATAATGGAATGAGCAATGATTAATATTTATTTCTAATAAATAATGTTTGTGTT<br/> GTTTGTGTTTGAATGATTGTTGGAGGAGGATGAATGAAGAAGGATGATTGAATGATTGGTTA<br/> GATACAAAATGCGTCGGTTGGTTTGTGACAGAGTGAGTGTGAATGATATCTCTCTAAATC<br/> ACTTGCTTGGTAATTATTGATAGGTGTGAGTATTTTTCTTCTTTATTTTACATATTGAT<br/> TTATATGTATGTGTGTATATATATATATATATTAATAAAGTAATCTTTCATGAATAAATAATA<br/> AAGAAAGATTACAATTATTTATTTATTATGCATTGATTTGCTTTATTGTTTGTGTTTGTGTTT<br/> GTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAATAAAA<br/> TAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT</p>              |
| C31 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGAATGAAAAAAGATGATTGAATCAATGATTAGAT<br/> ACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAATAAAA<br/> TCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGAATA<br/> ATATATATGTATGTATATATATATATATATATATTAATAAAGTAATCTTTCATGAATAAATAA<br/> TAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTTGTGTT<br/> TTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAATAA<br/> AATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT</p>          |
| C33 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATATTAATAAAGTAATCTTTCATGAA<br/> TAAATAATAAAGAAAGATAACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATATA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br/> TCATTT</p>   |
| C35 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGGATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATATTAATAAAGTAATCTTTCATGAATA<br/> AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTT<br/> TTGTTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACA<br/> AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>  |

Table 13 (continued)

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| C36 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTGTAAAAAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTGGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTA AAAAGTAATCTTTCA<br>TGAATAAATATTCATAAATAATAAGAAAGATTACAATTATTCATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTTTCGTTTCGTTGTTAAATGTTTCAAATTA AAATGCAAGTTGTTTG<br>AAACATTA AAATAAACAAACGAATAAAGGAAAAAATTAGCATATATGTGGATGATAATTT<br>CAATATGTTTTATATCATTT |
| C37 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCCTTCATGAA<br>TAAATAAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT                |
| C38 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATTA AAAAGTAATCCTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTT<br>TGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAACAATAA<br>ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT                           |
| C39 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATTA AAAAGTAATCCTTCATGAAT<br>AAATAAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br>TTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT                   |
| C40 Cat6 | TAAAAGTAATAATTGTATGTGCATTGATTGATATTTATTATTATCAAATAAATAATGTTT<br>GTTTGTTTAAAAAGAAATGTTTGATGATGGTGAATGAAAAAGATGATTGAATCAATGATTG<br>GATACATAATGCATCAGTTGATTTGTAACAGAGAGAGTGAGAGTGAAAGAATCTCTATCT<br>AAATCCCCTTGCTAAGTAATTATTGATATGTGTGATATTTTTCTTTCTTTATCATACTGA<br>ATGATTTATATGTATGTATGTATATATATATATATTA AAAAGTAATCCTTCATGAATA<br>AATAAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                 |

Table 13 (continued)

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| C41 Cat6 | TAAAAGTAATAATTGTATTTGCACTGAGTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTGTGTGTAAAAGAGTATTTGATGATGATGAATGAAAAAGATGATTGAATCACTGATTA<br>GATACAAAATGCATCTGGTGATTTGTATCAGAGAGAGTGAGAATGAAAAATCTCTAAAT<br>AAATCTCCCGATAAGTAATAATAGATATGAGTAATATTTTTCCCTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGACTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT |
| C42 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATTA AAAAGTAATCTTTCATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTT<br>TGTGTTAAATGTTTCAAATTA AAATGCAAGTTTTTTGAAACCTTTAAATAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT            |
| C43 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAACAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATGTATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT |
| C44 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT |
| C45 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATACATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT |

Table 13 (continued)

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| C46 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCAT<br>TT                    |
| C47 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTGTTAAAAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTGGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATATTA AAAAGTAATCTTT<br>CATGAATAAATATTCATAAATAATAAAGAAAGATTACAATTATTCATTTATTATGCATTG<br>ATTTACTTTATTGTTTGTTTCGTTTCGTTGTTAAATGTTTCAAATTA AAATGCAAGTTGTT<br>TGAAACATTA AAATAAACAAACGAATAAAGGAAAAAATTAGCATATATGTGGATGATAAT<br>TTCAATATGTTTTATATCATT |
| C48 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT                  |
| C49 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                   |
| C50 Cat6 | TAAATGTAATAAGTGTATGCGCAGAGATATATATATAATATTCTCAAATAATTTGTGTGT<br>GTGTGTTAAAGAGAATATTTGATGGTGGTGAGTGAAAAGAGGTGAGTGTCTCAGTGTTGA<br>GATACAAAATGTCTCAGGTGTTTTGTCCAGAGAGAGTGAGAGTGAAAATATCTCAATAT<br>ATATCCCGTGATGTGTTATTATATATGTGTGTTATTTTTTCACTTTTTTTCATATAGAGT<br>ATTATATATATGTATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                    |

Table 13 (continued)

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| C53 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br/> AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATTATGTTTTATATC<br/> ATTT</p> |
| C54 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br/> AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>     |
| C55 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br/> AATAATAAGAAAGATACAATTATTTATTTATTATGCATTGATCTACTTTATTGTTTGT<br/> TGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACA<br/> AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCA<br/> TTT</p>      |
| C56 Cat6 | <p>TGTAAGTAATAATTGTACATGCATTGATTTATATTTATTTTTATCAAATAATGTTTGTGTT<br/> GTTTGTGTTGAAAGATTATTGGAGGAGGATGAATGAAGAAGGATGATTGAATCATTGGTTA<br/> GATACAAAATGCATCAGGTGATTTGTGACAGAGAGAGTGGAATGAATATCTCTCTAAAT<br/> AACTCGCTTGGTAAGTAATAATAGGTGTGAGTAATATTTTTCTTTATTTTACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTAATAAGTAATCTTTCATGAATA<br/> AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>    |
| C57 Cat6 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGAATGAAAAAGATGATTGAATCAATGATTAGAT<br/> ACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAATAAA<br/> TCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGAATA<br/> ATATATATGTATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATAA<br/> ATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACA<br/> AATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCA<br/> TTT</p>      |

Table 13 (continued)

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| C58 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTGTTTAAAAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTGGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATAAATCCCCTGATAAGTAATAATAG<br>ATATGAGTAATATTTTTACCTTATTTAACATATTGAATAATATATATGTATGTATATATA<br>TATATATATATTA AAAAGTAATCTTT CATGAATAAATAATAAGAAAGATTACAATTATT<br>TATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTTGTTTGTTTAAATGTTTCAAAT<br>TAAAATGCAAGTTATTTGAAACATTAAATAAACAAATAAATAAGGTAAAAAATTAGCAT<br>ATATGTGAATGATAATTTTAATATGTTTTATATCATT |
| C59 Cat6 | TAAAAGTAATAATTGTATTTGCACTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTT CATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                                        |
| C60 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTT CATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT                                    |
| C61 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATATATATATATATATATATATATTA AAAAGTAATCTTT CATGAATAAATAAT<br>AAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGTTT<br>TGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACAAATAA<br>ATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT                                            |
| C62 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTT CAT<br>GAATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTG<br>TTTGTTTGTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAAA<br>TAAACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTT<br>ATATCATT                                     |

Table 13 (continued)

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| C63 Cat6 | TAAAAGTAATAATTGTATTTGCCTTGATTTATATTTATTATTATCCAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCCATGATTA<br>GATACCAAATGCCTCCGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTT<br>GTTTGCTGTTAAATGTTTCAAATTA AAATGCAAGTTACTTTGAAACATTAAATAAACA<br>AATAACTAACGTAAAAAATTAGCATATATGTGAATGATCATTTCAACATGTTTTACATCA<br>TTT                                              |
| C64 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCGTTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACA<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                                             |
| C65 Cat6 | TAAAAGTAATAATTGTATTCGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACA<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                                             |
| C66 Cat6 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTTAAAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACA<br>AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT |
| C1 Cat7  | TAAAAGTAATAATTGTATGTGCATTGATTGATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCTAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT                                              |

Table 13 (continued)

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| C2 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATATTTAAAAAGTAATCTTTCATGA<br>ATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTT<br>TGTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATA<br>AACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCACTATGTTTTAT<br>ATCATT |
| C3 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAAT<br>AAATAATAAGAAAGATTACAATTATTCATTTATTATGCATTGATTTACTTTATTGTTT<br>TTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT   |
| C4 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAAT<br>AAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>TTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT   |
| C5 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT    |
| C6 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAATAAATCTCTAAAT<br>AACTCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAATAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTT<br>TTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAA<br>AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT             |

Table 13 (continued)

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| C7 Cat7  | <p>TAAAAGTAATAATTGGATTGGCCATGAATTATAATTAATTATTATCAAATAAATTTTGGTT<br/> GGTTGGTTAAAAGGTTATTTGATGGTGGTGAATGAAAAAAGATGATTGAATCAATGATT<br/> AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAAT<br/> AAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br/> TTTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAA<br/> CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br/> CATTT</p> |
| C8 Cat7  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br/> GTTTGTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br/> TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br/> TCATTT</p>      |
| C9 Cat7  | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br/> GTTTGTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br/> TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTGTTTGTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br/> TCATTT</p>      |
| C10 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br/> GTTTGTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br/> AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>         |
| C11 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTGT<br/> GTTTGTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br/> AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>         |

Table 13 (continued)

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| C12 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br/> AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATAATATATATGTATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAAT<br/> AATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTG<br/> TTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACAAA<br/> TAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT<br/> T</p>      |
| C14 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br/> AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br/> TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br/> AATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAAT<br/> AAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br/> TTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAA<br/> CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br/> CATTT</p>  |
| C15 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTCT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br/> AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>   |
| C16 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> GTAATATATATATATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br/> AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br/> TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAC<br/> AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br/> ATTT</p>   |
| C17 Cat7 | <p>TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br/> GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br/> GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAGATCTCAAAAT<br/> AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br/> ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br/> TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br/> GTTTGTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br/> ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br/> TCATTT</p> |

Table 13 (continued)

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| C18 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT       |
| C19 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAAT<br>AAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br>TTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT      |
| C20 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATATATTA AAAAGTAATCTTTCAT<br>GAATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTG<br>TTTGTTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAAA<br>TAAACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTT<br>ATATCATTT |
| C21 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATATTA AAAAGTAATCTTTCATGAAT<br>AAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br>TTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAATAAAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT    |
| C22 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATATATTA AAAAGTAATCTTTCATG<br>AATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTT<br>TTGTTTTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTA AAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTA<br>TATCATTT   |

Table 13 (continued)

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| C23 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>GTAATATATATGTATGTGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTT<br>GTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCAT<br>TT     |
| C24 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTA AAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTCTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT    |
| C25 Cat7 | AAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAGTCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATTA AAAAGTAATCTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTGT<br>TTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT         |
| C26 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACGAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATTATTTCAATATGTTTTATA<br>TCATTT |
| C27 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTA AAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTAAATGTTTCAAATTA AAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT  |

Table 13 (continued)

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| C28 Cat7 | AAAAAGTGATAAGAGTGTATGCGTAGAGTTATATATATTATTATCAAATAAAAAGTTGTGT<br>GTGTGTGTAAAAGAGTATTCTATGATGATGAATGAAGAAAGATGATGGAATCAATGATTA<br>GATGCAAAATGCATCAGGTGATTTGTAACAGAGAGGGTGAGAAGGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATATATATTTAAAAAGTAATCTTTCA<br>TGAATAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATT<br>GTTTGTTTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTT<br>TATATCATT |
| C29 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTTCA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT              |
| C30 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTTCA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT              |
| C31 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAACGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATTTAAAAAGTAATCTTTTCA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT                |
| C32 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTTCA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTTAAATGCAAGTTATTTGAAACATTAAATAAAC<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATT           |

Table 13 (continued)

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| C33 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT  |
| C34 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT  |
| C35 Cat7 | TAAAAGTGATAAAGTATATGCACAGAGATATATATATTATTATCAAATAAAATTTGTGT<br>GTGTGTGTAAAAGAGTATTTGTTGATGAGGAGTGTAAGAGAGGTGTGAGTCTCTGATTT<br>GATACACAATGCGTCTGGTGTGTTGTATCAGAGAGAGTGAGAGAGAGAAAAATATCTAAAT<br>ATATCTCCCGATATGTGTTATTAGATATGAGTGATATTTTTCCCTATTTTTCATATTGA<br>GTATTATATATGTGTGTGTATATATATATATATATATATTTAAAAAGGTAAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT |
| C36 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT    |
| C37 Cat7 | TGTAAGTAATAATTGTACATGCATTGATTTATATTTATTTAATCAAATAATGTTTGTTT<br>GTTTGTTTGAAAGATTATTTGGTGGAGGATGAATGAAAAAGGATGATTGAATCATTGGTT<br>AGATACAAAATGCGTCGGGTGATTTGTGACAGAGTGAGTGTGAATGAATATCTCTCTAAA<br>TCACTCGCTTGGTAAGTAATGATAGATGTGAGTAATATTCTTACTTTATTTTACATATTG<br>AATAATATATATGTATGTATATATATATATATATTTAAAAAGTAATCTTTCATGAATAAAT<br>AATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTGTTG<br>TTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAACA<br>TAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATT<br>T        |

Table 13 (continued)

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| C39 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTAATAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C41 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTAATAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT     |
| C42 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTAATAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT     |
| C43 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTGTGTATATATATATATATATATATTAATAAAGTAATCTTTCATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT     |
| C44 Cat7 | AAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTAATAAAGTAATCTTTCATGAA<br>TAAATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTATTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT |

Table 13 (continued)

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| C45 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATTAATAAGTAATCTTTTCATGAATAAATA<br>ATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGTTTGT<br>TTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAAAT<br>AAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCATTT      |
| C46 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATATGTATATATATATATATATATATATTAATAAGTAATCTTTTATG<br>AATAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGT<br>TTGTTTGTTTGTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAAT<br>AAACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTA<br>TATCATTT    |
| C47 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATGATATATATGTATGTATATATATATATATATATATTAATAAGTAATCTTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT |
| C48 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATTAATAAGTAATCTTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C49 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAGATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATTAATAAGTAATCTTTTCATGAATAA<br>TAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>GTTTTGTTGTTAAATGTTTCAAATTAATAATGCAAGTTATTTGAAACATTAAATAAACAA<br>ATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATCAT<br>TT        |

Table 13 (continued)

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| C50 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATATTTAAAAAGTAATCTTTCATGAA<br>TAAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTT<br>GTTTGTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAA<br>ACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATA<br>TCATTT |
| C52 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAAT<br>AAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br>TTTGTGTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT     |
| C53 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT      |
| C54 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT      |
| C55 Cat7 | AAAAAGTAATAATGGTATCCGCATGGATTTAATTTATTTATTATCAAATATTTTTGTTT<br>GTTTGTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATTTGAGTAATATTTTTACCTTTTTAACATATTGA<br>ATAATATATATGTGTGTATATATATATATATATATTTAAAAAGTAATCTTTCATGAATA<br>AATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT          |

Table 13 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C56 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTTTAAAAAGATCTCTTCGTGTATATA<br>TTATAGAGAGAGATCACTTTTATTTTTTAAATGCGCAGAGATACACTATAGTGTGTGTGT<br>GTTGTGGTGAAAAGTGTCTCAAATTAATGTGCGTGTTTTTTGACATTTTAATATACACAT<br>ATATATGGGGTAAAATTTTCGCATATGTGAGAGAGAAAATCTCAATGTGTTATATAACAT<br>TT |
| C57 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATATATTTAAAAAGTAATCTTTCA<br>TGAATAAATAAAGAAAGATTACAATTATTTATTTTGAAGTTATTTGAAACATTAAA<br>ATAAACAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTT<br>TATATCATT                                                                 |
| C58 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATATTTAAAAAGTAATCTTTTATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT |
| C59 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTTATGAATA<br>AATAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>TTGTTTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |
| C60 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTTTAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTATATATATATATATATATATTTAAAAAGTAATCTTTTCTGAATA<br>AATAATAAAGAAAGATTACCATTATTTATTTATTATGCATTGATTTACTTTATTGGTTGG<br>TTGGTTTGGTGGTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAAAATAAAC<br>AAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATATC<br>ATTT   |

Table 13 (continued)

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C61 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATT<br>AGATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATAATATATATGTATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAAT<br>AAATAATAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTG<br>TTTGTGTTGTTGTTAAATGTTTCAAATTAATGCAAGTTATTTGAAACATTAAATAAA<br>CAAATAAATAAGGTAAAAAATTAGCATATATGTGAATGATAATTTCAATATGTTTTATAT<br>CATTT |
| C62 Cat7 | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTGTTAAAAGATTATTTGATGATGATGAATGAAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTGTAACAGAGAGAGTGAGAATGAAAAAATCTCAAAAT<br>AAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTGA<br>ATAATATATATGTATGTGTATATATATATATATATTAATAAGTAATCCTTCCTGAATAAA<br>TAATAAAGAAAGATTACCATTTTTATTTTTATGCATTGATTTACTTTATTGCTTGTTT<br>GTGTTGTTGTTAAAAGTTTCCAATTTAAATGCACGTTATTTGAAACCTTTAAATAAACCA<br>ATAAATAAGGGAAAAAATTTTCCTATATGTGAACGATAATTTCCATAATGTTTTATATA<br>ACAT  |

Table 15 Nucleotide sequences of ITS2 region *B. malayi*, *B. pahangi*, *B. timori*, and *D. immitis*.

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AY988599Bm<br>( <i>B. malayi</i> )  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTTGTTT<br>GTTTGTAAAAAGATTATTTGATGATAATGAATGAAAAAGATGATTGAATCAATGATTA<br>GATACAAAATGCATCAGGTGATTTAGTAACAGAGAGAGTGAGAATGAAAAATCTCAAAA<br>TAAATCCCCTGATAAGTAATAATAGATATGAGTAATATTTTTACCTTATTTAACATATTG<br>AATATATATGTATATGTATATATATATATATATATATATTAATAAGTAATCTTTCATGAATAAA<br>TAATAAAGAAAGATTACAATTATTTATTTATTATGCATTGATTTACTTTATTGTTTGT<br>GTTTGTGTTAAATGTTTCAAATTAATAATGCAAGCTATTTGAAACATTAAATAAACA<br>ATAAATAAGGTAAAAAATTAGCATATATATATGAATGATAATTTCAATATGTTTTATATC<br>ATTT                                                                                                                                |
| AY988600Bp<br>( <i>B. pahangi</i> ) | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTTATTATTATCAAATAATTTTT<br>GTTTGTGTTTAAAAAGATTATTTGATGATGATGAATGAAAAAGATGATTGAATCAATGA<br>TTAGATACAAAATGCATCAGGTGATTTGTAACAGAGAATGAGAATGAAAAATCTCAAAA<br>ATAAATCCCCTGATAAGTAATAGATATGAGTAATATTTTTACCATATTTAACATATTGAA<br>TATATATATATATATATATATATATATATATATATATATATATATATATATATATATA<br>TATATATATATATTAATAAATAATCTTTCATGAATAATTATTTATAATAATAAAGAAAG<br>ATTATAATTATTCATTTATTATGCATTGATTTACTATATTGTTTGTGTTTGTGTTTGTGTT<br>GTTAAATGTTTCAAATTAATAATGCAAGTTATATTTGAAACATTAAATAAACAATAAAT<br>AGAGTAAAAAATTAGCATATATATGTGAATGATAATTTCAATATGTTTTATATCATT                                                                            |
| AF499130Bm<br>( <i>B. malayi</i> )  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTGTTATTAAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTAGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTAATAAGTAATCTTTCA<br>TGAATAAATATTCATAAATAATAAAGAAAGATTACAATTATTCATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTT<br>AAACATTAAATAAACAACGAATAAAGGAAAAAATTAGCATATATGTGAATGACAATTT<br>CAATATGTTTTATATCATT                                                                                                                 |
| AF499132Bt<br>( <i>B. timori</i> )  | TAAAAGTAATAATTGTATTTGCATTGATTTATATTTATTATTATCAAATAATTTTCATTC<br>AAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTGTTATTAAGATTATTTGA<br>TGATGATGAATGAAAAAGATGATTGAATCAATGATTAGATACAAAATGCATCAGGTGAT<br>TTGTAACAGAGAGTGAGAATGAAAAATCTCAAAATGAATCCCCTGATAAGTAATAGATA<br>TGAGTGATATTTTTACCTTATTTAACTTATTGAATATATATATTAATAAGTAATCTTTCA<br>TGAATAAATATTCATAAATAATAAAGAAAGATTACAATTATTCATTTATTATGCATTGAT<br>TTACTTTATTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTT<br>AAACATTAAATAAACAACGAGTAAAGGAAAAAATTAGCATATATGTGAATGACAATTT<br>CAATATGTTTTATATCATT                                                                                                                 |
| AF217800Di<br>( <i>D. immitis</i> ) | TACTACTACTACTAATACTAATACTAATACTACTATTAACATCATTATGCTGCTTATTTT<br>CATTCTTTTTCAAATAATGCAAGAATGAAATAGAATGAATGAATGATGTTTAATAGATTA<br>ATAGATGAATAGTTAGTAGTAGTTAGTAGTTAGTTAGATAGATAGATAAATGAAATGATG<br>ATGAAATATTTTTATTCGATCAATTGAATATAAACGGTGATATTCGTTGGTGTCTATATT<br>TTATCTAAGTTATCGCCTAACCGTCGATAGCGATGAAGATAAATGATAGCTTAATTGAT<br>GATGATTGCTCAATTAAGTAGACTTAATAAGCATTTTAGCTAGTATGCTACCAACAAAAT<br>AATACACACACACATACATAAATAATATGATATAATTGTTATTTATAATAATTTTTCAA<br>TAACTCTAAGCGGGGGATCACCTGGCTCGTGGATCGATGAAGAACGCAGCTAGCTGCGAT<br>AAATAGTGCGAATTGCAGACGCATTGAGCACAAAGATTTGCAATGCACATTGCACCATCG<br>GGTTGATTCCCGATGGTACGTCTGGTTGAGGGTCAATATCGATCAGATTATCAAATAATA<br>T |

Table 18 Nucleotide sequence alignment of the ITS2 region of *Brugia* spp. compared to *B. malayi*, *B. pahangi*, and *D. immitis*.

CLUSTAL W (1.83) multiple sequence alignment

|            |      |                                                              |                  |    |
|------------|------|--------------------------------------------------------------|------------------|----|
| C28        | Cat1 | AAAGAGTAAGCATTGAATTAGCATT-GATTTATACAAATA----                 | ATTATCGAATGATTGT | 55 |
| C28        | Cat2 | AATAAGAAGTAATAGTAGTAGCAGC-GATGAATATTTTTT----                 | ATTATCATCAAATATT | 55 |
| C1         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C19        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C39        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C52        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C21        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C14        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C61        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C4         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C4         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C2         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C53        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C8         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C43        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C62        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C20        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C35        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C14        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C15        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C36        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C30        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C13        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C15        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C54        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C9         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C33        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C31        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C57        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C28        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C9         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C45        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C17        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C37        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C2         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C47        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C11        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C64        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C50        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C55        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C33        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C34        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C10        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C32        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C57        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C6         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| AY988600Bp |      | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATTTATTATTATCAAATAATTTT |                  | 59 |
| C22        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C46        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C27        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C29        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C19        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C16        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C5         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C66        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C48        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C31        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C17        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C61        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C43        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |
| C44        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----                 | ATTATCAAATAATTTT | 55 |

Table 18(continued)

|            |      |                                              |                   |    |
|------------|------|----------------------------------------------|-------------------|----|
| C60        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C27        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C8         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C24        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C39        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C23        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C16        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C54        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C58        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C53        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C11        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C49        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C41        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C18        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C29        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C48        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C59        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C42        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C26        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C10        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C23        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C42        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| AF499132Bt |      | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| AF499130Bm |      | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C36        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C7         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C12        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C47        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C58        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C21        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C12        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C3         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C23        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C18        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C49        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAGATAAATTTT | 55 |
| C38        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C42        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C62        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C60        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C25        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C45        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C63        | Cat6 | TAAAAGTAATAATTGTATTTGCCTT-GATTTATATTTATT---- | ATTATCCAATAAATTTT | 55 |
| C26        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C46        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C5         | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C22        | Cat6 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C25        | Cat7 | AAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C44        | Cat7 | AAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C65        | Cat6 | TAAAAGTAATAATTGTATTCGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C59        | Cat6 | TAAAAGTAATAATTGTATTTGCACT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C1         | Cat7 | TAAAAGTAATAATTGTATGTGCATT-GATTGATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C6         | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C7         | Cat7 | TAAAAGTAATAATTGGATTGGCCAT-GAATTATAATTAAT---- | ATTATCAAATAAATTTT | 55 |
| C55        | Cat7 | AAAAAGTAATAATGGTATCCGC-AT-GGATTTAATTTATT---- | ATTATCAAATAAATTTT | 55 |
| C3         | Cat2 | TAAATGTTATAAGTGTATGCGCAGA-GATATATATTTATT---- | AATCTCAAATAA--TT  | 53 |
| C3         | Cat1 | TAAAAGTAATAAGTGTATGCGCAGA-GATTTATATTTATT---- | ATTCTCAAATAA--TT  | 53 |
| C50        | Cat6 | TAAATGTAATAAGTGTATGCGCAGA-GATATATATATAAT---- | ATTCTCAAATAA--TT  | 53 |
| C35        | Cat7 | TAAAAGTGATAAAAGTATATGCACA-GAGATATATATATT---- | ATTATCAAATAAAATT  | 55 |
| C35        | Cat1 | TAAAAGTAATAATAGTGTTTGCCT-GAGTTATATTTATT----  | ATTATCAAATAAATTTT | 55 |
| C57        | Cat2 | TAACAGTAATAATTGTATATGCATA-GAAAAAATTTATG----  | ATTATCAAATAAAAAAG | 55 |
| C46        | Cat1 | TAAAAGTAATAATAAATGTCATT-GATTGATATTTATT----   | ATTATCAATCAAAAT   | 55 |
| C40        | Cat6 | TAAAAGTAATAATTGTATGTGCATT-GATTGATATTTATT---- | ATTATCAAATAAATAA  | 55 |
| C37        | Cat7 | TGTAAGTAATAATTGTACATGCATT-GATTTATATTTATT---- | TTAATCAAATAATGTT  | 55 |
| C30        | Cat6 | TATAAGTGATAATGGAATGAGCAAT-GATTAATATTTATT---- | TCTAATAAATAATGTT  | 55 |
| C56        | Cat6 | TGTAAGTAATAATTGTACATGCATT-GATTTATATTTATT---- | TTTATCAAATAATGTT  | 55 |

[illegible]

Table 18(continued)

|            |      |                                               |                       |    |
|------------|------|-----------------------------------------------|-----------------------|----|
| C55        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C38        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C3         | Cat3 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C33        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C19        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C11        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C21        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C2         | Cat4 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C56        | Cat2 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C60        | Cat2 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C3         | Cat5 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C5         | Cat5 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C3         | Cat4 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C1         | Cat5 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C6         | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C57        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C22        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C39        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C27        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C24        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C31        | Cat2 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C10        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C49        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C7         | Cat4 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C1         | Cat4 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C45        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C6         | Cat5 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C17        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C6         | Cat3 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C9         | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C15        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C4         | Cat4 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C4         | Cat5 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C8         | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C2         | Cat3 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C16        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C1         | Cat3 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C31        | Cat1 | TAAAAGTAATAAGTGTATTTGCATA-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C25        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C29        | Cat1 | TAAAAGTAATAATTGTATTCGCATT-GATTGATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C46        | Cat2 | TAAAAGTACCAATTGTATTTGCATT-GATTCATATTTATT----  | ATTGTCAAATAAATTTT     | 55 |
| C44        | Cat1 | TAAAAGTAATAATTGTATTGGCATT-GATTTATATTTATT----  | ATTATCAAATAAATCCT     | 55 |
| C40        | Cat1 | TAAAAGTAATAATAGTATTTGCAGC-GATTTATATTTATT----  | ATTATCAAATAAATTAT     | 55 |
| C51        | Cat2 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C26        | Cat2 | TAAAAGTAATAATGGTATTCGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTG     | 55 |
| C14        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTAATATTTATT----  | ATTATCAAATAAATTAT     | 55 |
| C54        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C56        | Cat7 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C32        | Cat1 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCAAATAAATTTT     | 55 |
| C32        | Cat2 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATATCAT----  | ATTATCAAATAAATTTT     | 55 |
| C48        | Cat2 | TAAAAGTGTTATTAGAAATGGCATT-GATT-ATGATTATG----  | AAAATCAAATAGTTTT      | 54 |
| C49        | Cat2 | TAAAAATTGTAATTGCATTGGCTTT-TATTTATAATTATT----  | AAAATCAAATAGTTTG      | 55 |
| C27        | Cat2 | TAAAAGTAATAGTAGTATCAGCAAT-GATTTATATTTATT----  | ATCATCAAATAAATTGT     | 55 |
| C15        | Cat2 | GACATCTAATAAAAAGTATTTGCATT-GATTTCTATTTATT---- | TTAATCATATCCAGTT      | 55 |
| C55        | Cat2 | TAAAAGTAATAATTGTATTTGCATT-GATTTATATTTATT----  | ATTATCCA-TAATTTT      | 54 |
| AF217800Di |      | TACTACTACTACTAATACTAATACTAATACTACTATTAAC----  | ATCATTATGCTGCTTA      | 56 |
|            |      |                                               |                       |    |
| C28        | Cat1 | TGTT-----                                     | AGGTTGTT---TAGAAGATTA | 77 |
| C28        | Cat2 | TGTT-----                                     | GGTTGGTT---GAAAAGATGA | 77 |
| C1         | Cat6 | TGTT-----                                     | TGTTTGTT---TAAAAGATTA | 77 |
| C19        | Cat7 | TGTT-----                                     | TGTTTGTT---TAAAAGATTA | 77 |
| C39        | Cat6 | TGTT-----                                     | TGTTTGTT---TAAAAGATTA | 77 |
| C52        | Cat7 | TGTT-----                                     | TGTTTGTT---TAAAAGATTA | 77 |
| C21        | Cat7 | TGTT-----                                     | TGTTTGTT---TAAAAGATTA | 77 |

Table 18(continued)

|            |                                |    |
|------------|--------------------------------|----|
| C14 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C61 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C4 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C4 Cat6    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C2 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C53 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C8 Cat6    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C43 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C62 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C20 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C35 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C14 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C15 Cat7   | TGTC-----TGTTTGTT---TAAAAGATTA | 77 |
| C36 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C30 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C13 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C15 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C54 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C9 Cat6    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C33 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C31 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C57 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C28 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C9 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C45 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C17 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C37 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C2 Cat6    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C47 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C11 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C64 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C50 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C55 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C33 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C34 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C10 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C32 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C57 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C6 Cat6    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| AY988600Bp | TGTT-----TGTTTGTT---AAAAGATTA  | 80 |
| C22 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C46 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C27 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C29 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C19 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C16 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C5 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C66 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C48 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C31 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C17 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C61 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C43 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C44 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C60 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C27 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C8 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C24 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C39 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C23 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C16 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C54 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C58 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C53 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |
| C11 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA | 77 |

Table 18(continued)

|            |                                                                |     |
|------------|----------------------------------------------------------------|-----|
| C49 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C41 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C18 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C29 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C48 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C59 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C42 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C26 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C10 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C23 Cat1   | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C42 Cat1   | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| AF499132Bt | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| AF499130Bm | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C36 Cat6   | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C7 Cat6    | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C12 Cat6   | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C47 Cat6   | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C58 Cat6   | CATTCAAACAAGATTATTTTTCTTTATGCAAATAATTTTTGTTTGTTTATTA AAAAGATTA | 115 |
| C21 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C12 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C3 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C23 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C18 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C49 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C38 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C42 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C62 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C60 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C25 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C45 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C63 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C26 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C46 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C5 Cat6    | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C22 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C25 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C44 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C65 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C59 Cat6   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C1 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C6 Cat7    | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C7 Cat7    | TGGT-----TGGTGGT---TAAAAGGTTA                                  | 77  |
| C55 Cat7   | TGTT-----TGTTTGTT---TAAAAGATTA                                 | 77  |
| C3 Cat2    | TGTG-----TGTGTGTG---AAAAAGAGTT                                 | 75  |
| C3 Cat1    | TGTG-----TGTGTGTG---TAAAGAGTT                                  | 75  |
| C50 Cat6   | TGTG-----TGTGTGTG---TAAAGAGAA                                  | 75  |
| C35 Cat7   | TGTG-----TGTGTGTG---TAAAGAGTA                                  | 77  |
| C35 Cat1   | TGTT-----TGTGTGTG---AAAAAGAGTA                                 | 77  |
| C57 Cat2   | AGTT-----TGTGAGTT---AAAAGGATTA                                 | 77  |
| C46 Cat1   | TGTT-----TGTTTGTT---AAAAAGAATG                                 | 77  |
| C40 Cat6   | TGTT-----TGTTTGTT---TAAAGAATG                                  | 77  |
| C37 Cat7   | TGTT-----TGTTTGTT---TGAAAGATTA                                 | 77  |
| C30 Cat6   | TGTT-----TGTTTGTT---TGAATGATTG                                 | 77  |
| C56 Cat6   | TGTT-----TGTTTGTT---TGAAAGATTA                                 | 77  |
| C3 Cat6    | TGTT-----TGTTTGTA---TGAAAGATTA                                 | 77  |
| C24 Cat6   | TGTG-----TGTTAGTG---TAAAGAGTA                                  | 77  |
| C26 Cat1   | TGTG-----TGTTAGTG---AAAAAGAGTA                                 | 77  |
| C52 Cat1   | TGTT-----CGTTAGCC---AAAATGCATC                                 | 77  |
| C41 Cat6   | TGTT-----TGTGTGTG---TAAAGAGTA                                  | 77  |
| C28 Cat7   | TGTG-----TGTGTGTG---TAAAGAGTA                                  | 77  |
| C37 Cat2   | TGTT-----TGTTTGTT---AAAAAGATTA                                 | 77  |
| C21 Cat2   | TGTT-----TGTTTGTT---AAAAAGATTA                                 | 77  |
| C19 Cat2   | TGTT-----TGTTTGTT---AAAAAGATTA                                 | 77  |
| C5 Cat1    | TGTT-----TGTTTGTT---AAAAAGATTA                                 | 77  |
| C6 Cat2    | TGTT-----TGTTTGTT---AAAAAGATTA                                 | 77  |

Table 18(continued)

|            |      |                                |    |
|------------|------|--------------------------------|----|
| C7         | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C10        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C1         | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C4         | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C16        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C50        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C35        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C38        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C23        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C43        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C22        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C9         | Cat2 | CGTT-----TGTTTGTT---GAAAAGATTA | 77 |
| C36        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C11        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C14        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C5         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C43        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C6         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C5         | Cat3 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C7         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C58        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C58        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C52        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C18        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C41        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C20        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C5         | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C45        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C12        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C13        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C42        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C33        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C34        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C2         | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C30        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C40        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C29        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C25        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C2         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C8         | Cat2 | TGTA-----AGTGTGTT---AAAAAGATTA | 77 |
| AY988599Bm |      | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C4         | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C1         | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C12        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C30        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C50        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C59        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C56        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C4         | Cat3 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C17        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C2         | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C59        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C20        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C53        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C55        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C38        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C3         | Cat3 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C33        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C19        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C11        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C21        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C2         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C56        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C60        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |
| C3         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA | 77 |

Table 18(continued)

|            |      |                                              |                      |
|------------|------|----------------------------------------------|----------------------|
| C5         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C3         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C1         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C6         | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C57        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C22        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C39        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C27        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C24        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C31        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C10        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C49        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C7         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C1         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C45        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C6         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C17        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C6         | Cat3 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C9         | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C15        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C4         | Cat4 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C4         | Cat5 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C8         | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C2         | Cat3 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C16        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C1         | Cat3 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C31        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C25        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C29        | Cat1 | AGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C46        | Cat2 | TGTT-----TGTTTGTT---AAAAAGCCTA               | 77                   |
| C44        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C40        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C51        | Cat2 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C26        | Cat2 | TGTT-----TGTGTGTT---AAAAAGATTA               | 77                   |
| C14        | Cat1 | GGTT-----TGTTGGTG---AAAAAGATTA               | 77                   |
| C54        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C56        | Cat7 | TGTT-----TGTTTGTT---TAAAGATTA                | 77                   |
| C32        | Cat1 | TGTT-----TGTTTGTT---AAAAAGATTA               | 77                   |
| C32        | Cat2 | TGTT-----TGTTTGTT---AAAAAGAATA               | 77                   |
| C48        | Cat2 | AGTG-----TGTTTGTT---AAAAAGATTC               | 76                   |
| C49        | Cat2 | TGTG-----TGTAAGTG---AAATGATTA                | 77                   |
| C27        | Cat2 | TGGT-----TGGTTGTT---AAAAAGATTA               | 77                   |
| C15        | Cat2 | AATT-----TGTGTGTG---TAAGAGATAG               | 77                   |
| C55        | Cat2 | TGCT-----TGCTTGTT---AAAAAGATTA               | 76                   |
| AF217800Di |      | TTTT-----CATTCCTTTTCAAATAATGCA               | 81                   |
|            |      |                                              |                      |
| C28        | Cat1 | T---GAGTGGATAAAGATGGAAGAAT-GATGGTTGAGTCAC--- | TGATTGGATCCGGAG- 129 |
| C28        | Cat2 | T---TTGTTGATGATGAAGAAAAAAA-GAGGATGGAAGCAT--- | CGATGAGATGCAACA- 129 |
| C1         | Cat6 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C19        | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C39        | Cat6 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C52        | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C21        | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C14        | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C61        | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C4         | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C4         | Cat6 | T---TTGATGATGATGAATGAAAAA-GATGATT-AATCAA---  | TGATTAGATACAAAA- 128 |
| C2         | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C53        | Cat6 | T---TTGATGATGATGAATGAAAAAG-GATGATTGAATCAA--- | TGATTAGATACAAAA- 129 |
| C8         | Cat6 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C43        | Cat6 | T---TTGATGATGATGAATGAAAAA-GATGATTGAATCAA---  | TGATTAGATACAAAA- 129 |
| C62        | Cat6 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C20        | Cat7 | T---TTGATGATGATGAATGAAAAAAGATGATTGAATCAA---  | TGATTAGATACAAAA- 130 |
| C35        | Cat6 | T---TTGATGATGATGAATGAAAAA-GATGATTGAATCAA---  | TGATTAGATACAAAA- 129 |

[illegible]

Table 18(continued)

|            |                                                                  |
|------------|------------------------------------------------------------------|
| AF499132Bt | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 167 |
| AF499130Bm | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 167 |
| C36 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTGGATACAAAA- 167 |
| C7 Cat6    | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTGGATACAAAA- 167 |
| C12 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTGGATACAAAA- 167 |
| C47 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTGGATACAAAA- 167 |
| C58 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTGGATACAAAA- 167 |
| C21 Cat6   | T---TTGATGATGATGAATGAAAAAAAGATGATTGAATCAA---TGATTAGATACAAAA- 130 |
| C12 Cat7   | T---TTGATGATGATGAATGAAAAAAAGATGATTGAATCAA---TGATTAGATACAAAA- 130 |
| C3 Cat7    | T---TTGATGATGATGAATGAAAAAAAGATGATTGAATCAA---TGATTAGATACAAAA- 130 |
| C23 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C18 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C49 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C38 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C42 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C62 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C60 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C25 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C45 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C63 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCCA---TGATTAGATACCAAA- 129 |
| C26 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C46 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C5 Cat6    | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C22 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C25 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C44 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C65 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C59 Cat6   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C1 Cat7    | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C6 Cat7    | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C7 Cat7    | T---TTGATGGTGGTGAATGAAAAAAAGATGATTGAATCAA---TGATTAGATACAAAA- 130 |
| C55 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129 |
| C3 Cat2    | T---ATGTGGTGATAGAGAGTGAAA-AGAGGTGAGTGTCTCAG-TGTTGAGATACAAA- 129  |
| C3 Cat1    | T---TTTTGGTGATAGTGAAGTGAAG-AGAGGTGAGTGTCTCAG-TGATTAGATACAAA- 129 |
| C50 Cat6   | T---ATTTGATGGTGGTGAAGTGAAG-AGAGGTGAGTGTCTCAG-TGTTGAGATACAAA- 129 |
| C35 Cat7   | T---TTGTTGATGAGGAGTGTAAG-AGAGGTGAGTGTCTCTG-ATTTGATACACAATG- 131  |
| C35 Cat1   | T---TTGAGGATATTGAGTGAAG-AGAGGAGTGAGTCACTG-ATTAGATACAAAATG- 131   |
| C57 Cat2   | T---TTGAGGTTAATGAATGAAAAA-TGAGGTTTGAATCAC---TTCTGGGATTCAAAA- 129 |
| C46 Cat1   | T---TTGATGATAATTAATGAAAAA-AGATGATTGAATCAA---TGATTGGATACAAAA- 129 |
| C40 Cat6   | T---TTGATGATGGTGAATGAAAAA-AGATGATTGAATCAA---TGATTGGATACATA- 129  |
| C37 Cat7   | T---TGGTGGAGGATGAATGAAAAAAGATGATTGAATCAT---TGGTTAGATACAAAA- 130  |
| C30 Cat6   | T---TGGAGGAGGATGAATGAAGAA-GGATGATTGAATGAT---TGGTTAGATACAAAA- 129 |
| C56 Cat6   | T---TGGAGGAGGATGAATGAAGAA-GGATGATTGAATCAT---TGGTTAGATACAAAA- 129 |
| C3 Cat6    | T---TGGAGGAGGATGAATGAAAAA-GGATGATTGAATCAT---TGATTAGATACAAAA- 129 |
| C24 Cat6   | T---TTGATGATGATGAATGAAAAA-AGGTGTTTGAGTCAA---TGTTTAGATACAAAA- 129 |
| C26 Cat1   | T---TTGATGATAGAGAATGAAAGA-AGGTGTTTGAGTCAA---GGTTTAGATACAAAA- 129 |
| C52 Cat1   | CACCCTGATGATAATGAATGAATTA-TGATGATAGTACCAA---TGATTATATACAACT- 132 |
| C41 Cat6   | T---TTGATGATGATGAATGAAAAA-AGATGATTGAATCAC---TGATTAGATACAAAA- 129 |
| C28 Cat7   | T---TCTATGATGATGAATGAAGAA-AGATGATGGAATCAA---TGATTAGATGCAAAA- 129 |
| C37 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C21 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C19 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C5 Cat1    | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C6 Cat2    | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C7 Cat2    | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C10 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C1 Cat2    | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C4 Cat2    | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C16 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C50 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C35 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C38 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C23 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C43 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C22 Cat2   | T---TTGATGATAATGAATGAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |

[illegible]

Table 18(continued)

|            |                                                                   |
|------------|-------------------------------------------------------------------|
| C49 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C7 Cat4    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C1 Cat4    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C45 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTACATACAAAA- 129  |
| C6 Cat5    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C17 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C6 Cat3    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C9 Cat1    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C15 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C4 Cat4    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C4 Cat5    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C8 Cat1    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C2 Cat3    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C16 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C1 Cat3    | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C31 Cat1   | T---TTGATGATAATGAAGGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C25 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C29 Cat1   | T---TTGAGGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C46 Cat2   | T---TTGATGATTATGAATGAAAAAA-GATGATTGAATCAG---TGATTAGATGCAAAA- 129  |
| C44 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C40 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATGCAAAA- 129  |
| C51 Cat2   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C26 Cat2   | T---TGGATGATAATGAATGAAAAAA-GATGAGTGAATCAA---TGATTAGATACAAAA- 129  |
| C14 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGTTTGGATACAAAA- 129  |
| C54 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C56 Cat7   | T---TTGATGATGATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C32 Cat1   | T---TTGATGATAATGAATGAAAAAA-GATGATTGAATCAA---TGATTAGATACAAAA- 129  |
| C32 Cat2   | T---TTGATGATAATGAAAGAAAAAA-GATGTTAGTATCAC---AGTTTAGATACAAAA- 129  |
| C48 Cat2   | T---TTGATGATACTGAATGAAAAAA-GTTGCTTGAATCAA---TGATTAGATACAAAA- 128  |
| C49 Cat2   | T---TTGATGATAATGAATGAAAAAA-TATGATTGAATCAA---GGTTTAGATACAAAA- 129  |
| C27 Cat2   | T---TTGATGATAATGAATGAAAAAA-GATGGTTGAATCAA---TGAGTAGCTACAAAA- 129  |
| C15 Cat2   | A--TGTGGTTATGATGAATGTAAAGAGAAGATTGGTCAGA---TGATTCGATACATAC- 131   |
| C55 Cat2   | T---TTGATGATTATGGATGAAAAAA-GATGATTGAATCCA---TGATTAGATACCAAA- 128  |
| AF217800Di | AGAATGAAATAGAATGAATGAATGATGTTTAAATAGATTAATAGATGAATAGTTAGTAGTA 141 |
| *          |                                                                   |
| C28 Cat1   | TGCTTCTGGCGGTGTGGG--TGCGGAG-GGAGTGAGCTCGAAATAATTTCCAAGTTAATT 186  |
| C28 Cat2   | AGCATCATCTGGTTTTGT--AGCAGCG-GGGGGGGGAGGAAAAAATATTCTAAAAAATC 186   |
| C1 Cat6    | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAGTGAAAAAATCTCAAAATAAATC 186  |
| C19 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C39 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C52 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C21 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C14 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C61 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C4 Cat7    | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C4 Cat6    | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 184  |
| C2 Cat7    | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C53 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C8 Cat6    | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAA-TC 185  |
| C43 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C62 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C20 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 186  |
| C35 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGGATGAAAAAATCTCAAAATAAATC 185  |
| C14 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C15 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C36 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C30 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C13 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C15 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C54 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C9 Cat6    | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C33 Cat7   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 185  |
| C31 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 182  |
| C57 Cat6   | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC 182  |

[illegible]

Table 18(continued)

|     |      |                                                               |     |
|-----|------|---------------------------------------------------------------|-----|
| C18 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C49 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C38 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C42 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C62 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C60 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C25 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C45 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C63 | Cat6 | TGCCTCCGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C26 | Cat7 | TGCATCAGGTGATTT-GT--AACGGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C46 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C5  | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C22 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C25 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAGTCTCAAAATAAATC  | 185 |
| C44 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C65 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C59 | Cat6 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C1  | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCTAAATAAATC  | 185 |
| C6  | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAATAAATCTCTAAATAAATC  | 185 |
| C7  | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C55 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 185 |
| C3  | Cat2 | CGTCTCGGGTGTTTTGT--CACAGAG-AGAGTGAGAGTGAAAAATATCTTAAATATATC   | 186 |
| C3  | Cat1 | CGTCTCGGGTGTTTTGT--CACAGAG-AGAGTGAGAGTGAAAAATATCTCAAAATATATC  | 186 |
| C50 | Cat6 | TGTCTCAGGTGTTTT-GT--CACAGAG-AGAGTGAGAGTGAAAAATATCTCAATATATATC | 185 |
| C35 | Cat7 | CGTCTGGTGTTGT-AT--CAGAGAG-AGTGAGAGAGAGAAAAATATCTAAATATATCTC   | 187 |
| C35 | Cat1 | CGTCTGGTGAGTTTGTGT--CAGAGAG-AGTGAGAGTGAAAAAATCTCTAAATAAATCTC  | 188 |
| C57 | Cat2 | TGCATCGGGTGTTTAGT--GACAGAG-TGTGTGAGAATGTCACATTCTCAGTATTAATC   | 186 |
| C46 | Cat1 | TACATCCGTCGATTTAGT--TACTGAG-AGAGTGAGAGTGAAAAAATCTCTATCTAAATC  | 186 |
| C40 | Cat6 | TGCATCAGTTGATTT-GT--AACTGAG-AGAGTGAGAGTGAAAGAATCTCTATCTAAATC  | 185 |
| C37 | Cat7 | TGCGTCGGGTGATTT-GT--GACAGAG-TGAGTGTGAATGAATATCTCTCTAAATCACTC  | 186 |
| C30 | Cat6 | TGCGTCGGTTGGTTT-GT--GACAGAG-TGAGTGTGAATGA-TATCTCTCTAAATCACTT  | 184 |
| C56 | Cat6 | TGCATCAGGTGATTT-GT--GACAGAG-AGAGTGTGAATGAATATCTCTCTAAATAAATC  | 185 |
| C3  | Cat6 | TGCGTCGGGTGATTT-CT--AACAGAG-TGAGTGTGAATGAATATCTCTCTAAATAAATC  | 185 |
| C24 | Cat6 | TGCATCTGGTGATTT-GT--AACAGAG-AGAGTGAGAATGTATAAATCTCAATCAATC    | 185 |
| C26 | Cat1 | TGGTTCTGGTGTTTTAGT--GAGAGAG-AGAGTGAGAATGTAAAAATCTCAATCTCAATC  | 186 |
| C52 | Cat1 | TGCTTCGGGTGCATTTATTTATCATAT-ATAGTGATAATGAAAAAATCTCCGAATAAATC  | 191 |
| C41 | Cat6 | TGCATCTGGTGATTT-GT--ATCAGAG-AGAGTGAGAATGAAAAAATCTCTAAATAAATC  | 185 |
| C28 | Cat7 | TGCATCAGGTGATTT-GT--AACAGAG-AGGGTGAGAAGGAAAAAATCTCAAAATAAATC  | 185 |
| C37 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C21 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C19 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C5  | Cat1 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C6  | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C7  | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C10 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C1  | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C4  | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C16 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C50 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C35 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C38 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C23 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C43 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C22 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C9  | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C36 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C11 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C14 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C5  | Cat4 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C43 | Cat1 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C6  | Cat4 | TGCATCAGGTGACTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C5  | Cat3 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C7  | Cat5 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C58 | Cat2 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |
| C58 | Cat1 | TGCATCAGGTGATTTAGT--AACAGAG-AGAGTGAGAATGAAAAAATCTCAAAATAAATC  | 186 |

[illegible]

Table 18(continued)

|            |      |                                                                        |     |
|------------|------|------------------------------------------------------------------------|-----|
| C8         | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C2         | Cat3 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C16        | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C1         | Cat3 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C31        | Cat1 | TGCATCGGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C25        | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C29        | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C46        | Cat2 | TGCATCAGGTGATTTAGT - - TACAGGG - AGAGTGAGAATGACAAAAATCTCTAAATAACTC     | 186 |
| C44        | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C40        | Cat1 | TGCATCAGGTGATTTTGT - - AACAGCG - AGAGGGGGAAGGAAAAAATCTCAAAATAAATC      | 186 |
| C51        | Cat2 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C26        | Cat2 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C14        | Cat1 | TGCCTCAGGGGATTTAGT - - AACAGAG - AGAGTGAGAATGATAAAATCTCAAAATAAATC      | 186 |
| C54        | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C56        | Cat7 | TGCATCAGGTGATTTT - GT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC   | 185 |
| C32        | Cat1 | TGCATCAGGTGATTTAGT - - AACAGAG - AGAGTGAGAATGAAAAAATCTCAAAATAAATC      | 186 |
| C32        | Cat2 | TGCATCTCGTGTTTTATT - - AACAGAG - AGAGTGAGAATAAAAAAATCTCAAAATAAATC      | 186 |
| C48        | Cat2 | TGCCTCAGGTGACTCGCT - - AACAGAG - AGAGTGAGAAGGTAATAATTTCTAAATTAATC      | 185 |
| C49        | Cat2 | TGCGTCAGGTGATTTAGT - - AGCGGGGAGAGTGAGAATGAAATAATCTCAAAATAAATC         | 187 |
| C27        | Cat2 | TGCATCAGGTGATTTAGC - - AGCGGGG - GGGGGGAGAATGAAATAATCTCAAAATTAATC      | 186 |
| C15        | Cat2 | CGCATCACTTCATTTGGT - - ATCTTAG - CGGGGGGGAGGGAAAGATTACATCTCAAAATA      | 188 |
| C55        | Cat2 | TGCCTCCGGTGATTTAGT - - AACAGAC - AGAGTGAGAATGAAAAAATCTCTCCATTAATC      | 185 |
| AF217800Di |      | GTTAGTAGTTAGTTAGATA - GATAGATAAATGAAATGATGATGAAATATTTTTATTTCGAT        | 200 |
| *          |      |                                                                        |     |
| C28        | Cat1 | CCTT - GTTGAGTTGTGTT - - AGATTTGTGC - AATATTTTTTC - CTTTGTGTTACATATGGA | 241 |
| C28        | Cat2 | CCCC - CATAAGTAGTAAT - - AGATGTGAGG - AGTATTTTTT - CCTCCTTTTTTCATCTTGA | 241 |
| C1         | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C19        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C39        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C52        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C21        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C14        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C61        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C4         | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C4         | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 239 |
| C2         | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C53        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C8         | Cat6 | CCCT - GATAAGTAATAAC - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C43        | Cat6 | CCCT - GATAAGTAATAAC - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C62        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C20        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 241 |
| C35        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C14        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C15        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C36        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C30        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C13        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C15        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C54        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C9         | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C33        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C31        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 237 |
| C57        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 237 |
| C28        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C9         | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C45        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C17        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C37        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C2         | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C47        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C11        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 239 |
| C64        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C50        | Cat7 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |
| C55        | Cat6 | CCCT - GATAAGTAATAAT - - AGATATGAGT - AATATTTTTTA - CCTTATTTAACATATTGA | 240 |

[illegible]

Table 18(continued)

|     |      |                                                               |     |
|-----|------|---------------------------------------------------------------|-----|
| C5  | Cat6 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C22 | Cat6 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C25 | Cat7 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C44 | Cat7 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C65 | Cat6 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C59 | Cat6 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTT-CCTTATTTAACATATTGA  | 240 |
| C1  | Cat7 | CCTT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C6  | Cat7 | CCTT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C7  | Cat7 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C55 | Cat7 | CCCT-GATAAGTAATAAT--AGATTTGAGT-AATATTTTTTA-CCTTTTTTAACATATTGA | 240 |
| C3  | Cat2 | CCGT-GATGTGTTATAAT--AGATGTGTGT-TATTTTTTCA-CTTTTTTTCACATAGAGA  | 241 |
| C3  | Cat1 | CCGT-GATATGTTATAAT--AGATGTGTGT-AATTTTTTTA-CTTTTTTTCACATAGAGA  | 241 |
| C50 | Cat6 | CCGT-GATGTGTTATTAT--ATATGTGTGT-TATTTTTTCA-CTTTTTTTCATATAGAGT  | 240 |
| C35 | Cat7 | CCGA-TATGTGTTATTAG--ATATGAGTGA-TATTTTTTCC-CTATTTTTCATATTGAGT  | 242 |
| C35 | Cat1 | CCGA-TAAGTGATAATAG--ATATGAGTAA-TATTTTTTCC-TTATTTAACATATTGAGT  | 243 |
| C57 | Cat2 | GCTT-GGTGAGTTATTTT--AGCTTTGTGT-AATATTTTGA-CTTTATTTGACTTTGTGA  | 241 |
| C46 | Cat1 | CCTT-GCTAGGTAATTAT--TGATAGGTGT-GATATTTTTT-CTTCTTTAACTTACAGA   | 241 |
| C40 | Cat6 | CCTT-GCTAAGTAATTAT--TGATATGTGT-GATATTTTTT-CTTCTTTATCATACTGA   | 240 |
| C37 | Cat7 | GCTT-GGTAAGTAATGAT--AGATGTGAGT-AATATTTCTTA-CTTTATTTTACATATTGA | 241 |
| C30 | Cat6 | GCTT-GGTAATTATTGAT--AGGTGTGAGT-ATTTTTCTTT-CTTTATTTTACATATTGA  | 239 |
| C56 | Cat6 | GCTT-GGTAAGTAATAAT--AGGTGTGAGT-AATATTTTTT-CTTTATTTTACATATTGA  | 240 |
| C3  | Cat6 | GCTT-GGTAAGTAATAAT--AGGTGTGAGT-AATATTTTTT-CTTTATTTAACATATTGA  | 240 |
| C24 | Cat6 | TCAT-GATAAGTAATAAT--GGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C26 | Cat1 | CCAG-GATAAGTAGTAAT--GGGTAAGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C52 | Cat1 | CCCTTGATAATTCACATTAGTATATGAGT-AATATTTTTTA-CCTTCTTTAACATATTGA  | 249 |
| C41 | Cat6 | TCCC-GATAAGTAATAAT--AGATATGAGT-AATATTTTTT-CCCTATTTAACATATTGA  | 240 |
| C28 | Cat7 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C37 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C21 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C19 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C5  | Cat1 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C6  | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C7  | Cat2 | CCTT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C10 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C1  | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C4  | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C16 | Cat2 | CCTT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C50 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C35 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C38 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C23 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C43 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C22 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C9  | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C36 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C11 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C14 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C5  | Cat4 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C43 | Cat1 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C6  | Cat4 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C5  | Cat3 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C7  | Cat5 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C58 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C58 | Cat1 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C52 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C18 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C41 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C20 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C5  | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C45 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C12 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C13 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C42 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C33 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C34 | Cat2 | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |

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[illegible]

Table 18(continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C26 Cat2   | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATGGA | 241 |
| C14 Cat1   | CCCT-GATAGGTAATAAT--AGATATGAGT-AATATTTTTTG-CCTTATTTAGCATATGGA | 241 |
| C54 Cat1   | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C56 Cat7   | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 240 |
| C32 Cat1   | CCCT-GATAAGTAATAAT--AGATATGAGT-AATATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C32 Cat2   | CCCC-GATAAGTAATAAT--AGATATGAGT-ATTATTTTTTA-CCTTATTTAACATATTGA | 241 |
| C48 Cat2   | CCTA-GTTAAGTAATTTT--AGATATGTGT-ATTATTTTTTA-CATTATTTAACTTTATGA | 240 |
| C49 Cat2   | CCAA-GTTAAGTAATAAT--TGAGATGTGT-ATTTTTTTTC-CCTTATTTAACGAATTGG  | 242 |
| C27 Cat2   | CCCT-GATAAGTAATAAT--AGATAGGAGT-AATATTTCTA-CCTTATTCAACATGTTGA  | 241 |
| C15 Cat2   | ACCTCCCTAAGTAATGTAT-AGGTATGAGG-GATGTTTTTT-CCTCCTTCCTTATATTGA  | 245 |
| C55 Cat2   | CCCT-GATCAGTAATAAT--AGATATTAGT-AATATTTTTTA-CCTTATCTAACCCATTGA | 240 |
| AF217800Di | CAATTGAATATAAACGGT--GATATTCGTTGGTGTCTATA-TTTTATCTAAGTTATCGC   | 256 |
|            | * * *                                                         |     |
| C28 Cat1   | ATAG-----ATTAGTTTTAGTTTTTTTTTTTT                              | 267 |
| C28 Cat2   | AGAA-----ATAAGTAGAAGTAGATATATAT                               | 267 |
| C1 Cat6    | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C19 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C39 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C52 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C21 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C14 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C61 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C4 Cat7    | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C4 Cat6    | ATA-----ATATATATGTATGTATATATAT                                | 264 |
| C2 Cat7    | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C53 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C8 Cat6    | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C43 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C62 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C20 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 266 |
| C35 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C14 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C15 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C36 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C30 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C13 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C15 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C54 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C9 Cat6    | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C33 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C31 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 262 |
| C57 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 262 |
| C28 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C9 Cat7    | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C45 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C17 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C37 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C2 Cat6    | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C47 Cat7   | ATG-----ATATATATGTATGTATATATAT                                | 265 |
| C11 Cat6   | ATA-----ATATATATGTATGTATATATAA                                | 264 |
| C64 Cat6   | ATA-----ATATATATGTATGTATATA--                                 | 262 |
| C50 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C55 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C33 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C34 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C10 Cat6   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C32 Cat7   | ATA-----ATATATATGTATGTATATATAT                                | 265 |
| C57 Cat7   | ATA-----ATATATATGTATGTATATATATAT                              | 269 |
| C6 Cat6    | ATA-----ATATATATATGTATATATATAT                                | 269 |
| AY988600Bp | ATATATATATATATATATATATATATATATATATATATATATATATATATATATATAT    | 299 |
| C22 Cat7   | ATA-----ATATATATATGTATATATATAT                                | 267 |
| C46 Cat7   | ATA-----ATATATATATGTATATATATAT                                | 267 |
| C27 Cat6   | ATA-----ATATATATATATGTAT-----                                 | 259 |
| C29 Cat6   | ATA-----ATATATATATATGTATGTATAT                                | 265 |

Table 18(continued)

|            |      |                                |     |
|------------|------|--------------------------------|-----|
| C19        | Cat6 | ATA-----ATATATATATGTAT-----    | 259 |
| C16        | Cat7 | GTA-----ATATATATATATGTAT--ATAT | 263 |
| C5         | Cat7 | ATA-----ATATATATATATGTATATATAT | 265 |
| C66        | Cat6 | ATA-----ATATATATATATGTATATATAT | 265 |
| C48        | Cat6 | ATA-----ATATATATATATGTATATATAT | 265 |
| C31        | Cat7 | ATA-----ATATATATATATGTATATATAT | 265 |
| C17        | Cat6 | ATA-----ATATATATATATAT-----    | 259 |
| C61        | Cat6 | ATA-----ATATATAT-----ATATAT    | 257 |
| C43        | Cat7 | ATA-----ATATATATGTGTGTATATAT   | 263 |
| C44        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C60        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C27        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C8         | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C24        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C39        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C23        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C16        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C54        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C58        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C53        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C11        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C49        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C41        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C18        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C29        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C48        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C59        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C42        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C26        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C10        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C23        | Cat1 | ATA-----TATATAT-----TAA        | 286 |
| C42        | Cat1 | ATA-----TATATAT-----TAA        | 286 |
| AF499132Bt |      | ATA-----TATATAT-----TAA        | 286 |
| AF499130Bm |      | ATA-----TATATAT-----TAA        | 286 |
| C36        | Cat6 | ATA-----TATATAT-----TAA        | 286 |
| C7         | Cat6 | ATA-----TATATAT-----TAA        | 286 |
| C12        | Cat6 | ATA-----TATATAT-----TAA        | 286 |
| C47        | Cat6 | ATA-----TATATATAT-----TAA      | 288 |
| C58        | Cat6 | ATA-----ATATATATGTATGT--ATATAT | 299 |
| C21        | Cat6 | ATA-----ATATATATGTATGT---ATAT  | 259 |
| C12        | Cat7 | ATA-----ATATATATGTATGT---ATAT  | 262 |
| C3         | Cat7 | ATA-----ATATATATGTATGTATGTATAT | 266 |
| C23        | Cat7 | GTA-----ATATATATGTATGT--GTATAT | 263 |
| C18        | Cat6 | ATA-----ATATATATGTA-----TGT    | 257 |
| C49        | Cat7 | ATA-----ATATATATGTATGT--ATATAT | 263 |
| C38        | Cat6 | ATA-----ATATATATGTATGT--ATATAT | 263 |
| C42        | Cat6 | ATA-----ATATATATGTATGT-----AT  | 259 |
| C62        | Cat7 | ATA-----ATATATATGTATGTGTAT--AT | 263 |
| C60        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C25        | Cat6 | ATA-----ATATATATGTATGTAT---AT  | 261 |
| C45        | Cat7 | ATA-----ATATATATGTATGT---ATAT  | 261 |
| C63        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C26        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C46        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C5         | Cat6 | ATA-----ATATATATGTATGT-----AT  | 259 |
| C22        | Cat6 | ATA-----ATATATATGTATGT-----AT  | 259 |
| C25        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C44        | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C65        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C59        | Cat6 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C1         | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C6         | Cat7 | ATA-----ATATATATGTATGTATATATAT | 265 |
| C7         | Cat7 | ATA-----ATATATATGTATGTATATATAT | 266 |
| C55        | Cat7 | ATA-----ATATATATGTGTGTATATATAT | 265 |
| C3         | Cat2 | AT-----ATATGTGTATGTGTATATAT    | 263 |

Table 18(continued)

|            |                                 |     |
|------------|---------------------------------|-----|
| C3 Cat1    | AT-----ATATATGTATGTGTATATAT     | 263 |
| C50 Cat6   | ATT-----ATATATATGTATGTATATATAT  | 265 |
| C35 Cat7   | ATT-----ATATATGTGTGTGTATATATAT  | 267 |
| C35 Cat1   | AT-----ATATGTGTATGTATATATAT     | 265 |
| C57 Cat2   | AT-----ATATATGTATATATAT         | 259 |
| C46 Cat1   | ATGT-----ATATGTATGTGTATATATATAT | 267 |
| C40 Cat6   | ATG-----ATTTATATGTATGTATGTATAT  | 265 |
| C37 Cat7   | ATA-----ATATATATGTATGTATATATAT  | 266 |
| C30 Cat6   | TTT-----ATATGTATGTGTGTATATATAT  | 264 |
| C56 Cat6   | ATA-----ATATATATGTATGTATATATAT  | 265 |
| C3 Cat6    | ATA-----ATATGTATGTATGTATATATAT  | 265 |
| C24 Cat6   | ATA-----A-TATATATGTATGTAT       | 259 |
| C26 Cat1   | ATG-----TATATGTATATGT           | 257 |
| C52 Cat1   | ATA-----TATATGTATATGTATAT       | 269 |
| C41 Cat6   | ATA-----ATATATATGTATGTATATATAT  | 265 |
| C28 Cat7   | ATA-----ATATATATGTATGTATATATAT  | 265 |
| C37 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C21 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C19 Cat2   | ATAT-----ATATGTATATATATATATATAT | 267 |
| C5 Cat1    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C6 Cat2    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C7 Cat2    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C10 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C1 Cat2    | ATAT-----ATATATATATATATAT-----  | 261 |
| C4 Cat2    | ATAT-----ATATATATATATATATATATAT | 267 |
| C16 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C50 Cat2   | ATAT-----ATATGTATATATATATATATAT | 267 |
| C35 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C38 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C23 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C43 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C22 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C9 Cat2    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C36 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C11 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C14 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C5 Cat4    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C43 Cat1   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C6 Cat4    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C5 Cat3    | ATAT-----ATATGTATATGTATATGTATAT | 267 |
| C7 Cat5    | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C58 Cat2   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C58 Cat1   | ATAT-----ATATGTATATGTATATATATAT | 267 |
| C52 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C18 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C41 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C20 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C5 Cat2    | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C45 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C12 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C13 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C42 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C33 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C34 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C2 Cat2    | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C30 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C40 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C29 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C25 Cat2   | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C2 Cat5    | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C8 Cat2    | ATAT-----GTATGTATA---TGTATATAT  | 263 |
| AY988599Bm | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C4 Cat1    | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C1 Cat1    | ATAT-----ATATGTATA---TGTATATAT  | 263 |
| C12 Cat1   | ATAT-----ATATGTATA---TGTATATAT  | 263 |

Table 18(continued)

|     |      |                                    |     |
|-----|------|------------------------------------|-----|
| C30 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C50 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C59 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C56 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C4  | Cat3 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C17 | Cat2 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C2  | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C59 | Cat2 | ATAT-----ATATGTATATGTATATATATAT    | 267 |
| C20 | Cat1 | ATAT-----ATATG-----TGTATATAT       | 259 |
| C53 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C55 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C38 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C3  | Cat3 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C33 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C19 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C11 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C21 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C2  | Cat4 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C56 | Cat2 | ATAT-----ATATGTATAT---GTATATAT     | 263 |
| C60 | Cat2 | ATAT-----ATATGTATATATATGTATATAT    | 267 |
| C3  | Cat5 | ATAT-----ATATGTATAT-----AT         | 257 |
| C5  | Cat5 | ATAT-----ATATGTATA-----TATAT       | 259 |
| C3  | Cat4 | ATAT-----ATATGTATA-----TATAT       | 259 |
| C1  | Cat5 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C6  | Cat1 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C57 | Cat1 | ATAT-----ATATGTATA----TATATATAT    | 263 |
| C22 | Cat1 | ATAT-----ATATGTATA----TATATATAT    | 263 |
| C39 | Cat1 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C27 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C24 | Cat1 | ATAT-----ATATGTATG----TGTATATAT    | 263 |
| C31 | Cat2 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C10 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C49 | Cat1 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C7  | Cat4 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C1  | Cat4 | ATAT-----ATATGTATA----TGTATATAT    | 263 |
| C45 | Cat1 | ATAT-----ATATGTATA-----TATAT       | 259 |
| C6  | Cat5 | ATAT-----ATATGTATATGTATATATATAT    | 267 |
| C17 | Cat1 | ATAT-----ATATGTATA----TATATATAT    | 263 |
| C6  | Cat3 | ATAT-----ATATGTATA----TATATATAT    | 263 |
| C9  | Cat1 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C15 | Cat1 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C4  | Cat4 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C4  | Cat5 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C8  | Cat1 | ATAT-----ATATGTATA-----TATATAT     | 261 |
| C2  | Cat3 | ATAT-----ATATGTATATATATATATATAT    | 267 |
| C16 | Cat1 | ATAT-----ATATGTATATATATATATATAT    | 267 |
| C1  | Cat3 | ATAT-----ATATGTATATGTATATATATAT    | 267 |
| C31 | Cat1 | ATAT-----ATATGTATATGTATATATATAT    | 267 |
| C25 | Cat1 | ATAT-----ATATGTATATGTGTATATATAT    | 267 |
| C29 | Cat1 | ATAT-----ATATGTATATGTGTATATATAT    | 267 |
| C46 | Cat2 | ATAT-----ATATGTCCTATGTACATATATATAT | 270 |
| C44 | Cat1 | ATAT-----ATATGTATATGTA--TATATGTAT  | 267 |
| C40 | Cat1 | ATA-----TATATGTATATATATATAT        | 261 |
| C51 | Cat2 | ATA-----TATATATATATATATATATAT      | 261 |
| C26 | Cat2 | ATA-----TATATGTATATGTATAT          | 261 |
| C14 | Cat1 | ATA-----TATATGT                    | 251 |
| C54 | Cat1 | ATA-----TATATGTATATGTATATAT        | 263 |
| C56 | Cat7 | ATAA-----TATATATGTATGTATATAT       | 263 |
| C32 | Cat1 | ATA-----TATATGTATATGTATATAT        | 263 |
| C32 | Cat2 | AAAT-----ATATGTGTATGTGTATATATAT    | 267 |
| C48 | Cat2 | AT-----ATATTCGTATACGCGT            | 258 |
| C49 | Cat2 | ATT-----AGATAGGGATATG-GT           | 260 |
| C27 | Cat2 | ATAT-----AGATGTAGATGTATATATATAT    | 267 |
| C15 | Cat2 | ATGT-----GTATGTGTGTGTGTATATAT      | 271 |
| C55 | Cat2 | ATA-----TCTATCGGTCT                | 254 |

Table 18(continued)

|            |                                       |     |
|------------|---------------------------------------|-----|
| AF217800Di | CTAACCGTCG-----ATAGCGATGAAGATAAAATGAT | 288 |
| C28 Cat1   | AT-----TTT-----                       | 272 |
| C28 Cat2   | ATAAAAATTTATAT-----                   | 281 |
| C1 Cat6    | ATATATATATAT-----                     | 278 |
| C19 Cat7   | ATATATATATAT-----                     | 278 |
| C39 Cat6   | ATATATATATAT-----                     | 278 |
| C52 Cat7   | ATATATATATAT-----                     | 278 |
| C21 Cat7   | ATATATATATAT-----                     | 278 |
| C14 Cat7   | ATATATATATAT-----                     | 278 |
| C61 Cat7   | ATATATATATAT-----                     | 278 |
| C4 Cat7    | ATATATATATAT-----                     | 278 |
| C4 Cat6    | ATATATATATAT-----                     | 276 |
| C2 Cat7    | ATATATATATATAT-----                   | 280 |
| C53 Cat6   | ATATATATATAT-----                     | 277 |
| C8 Cat6    | ATATATATATAT-----                     | 277 |
| C43 Cat6   | ATATATATATATAT-----                   | 279 |
| C62 Cat6   | ATATATATATATATAT-----                 | 282 |
| C20 Cat7   | ATATATATATATATAT-----                 | 282 |
| C35 Cat6   | ATATATATATAT-----                     | 277 |
| C14 Cat6   | ATATATATATAT-----                     | 277 |
| C15 Cat7   | ATATATATATAT-----                     | 277 |
| C36 Cat7   | ATATATATATAT-----                     | 277 |
| C30 Cat7   | ATATATATATAT-----                     | 277 |
| C13 Cat6   | ATATATATATAT-----                     | 277 |
| C15 Cat6   | ATATATATATAT-----                     | 277 |
| C54 Cat6   | ATATATATATAT-----                     | 277 |
| C9 Cat6    | ATATATATATAT-----                     | 277 |
| C33 Cat7   | ATATATATATAT-----                     | 277 |
| C31 Cat6   | ATATATATAT-----                       | 272 |
| C57 Cat6   | ATATATATATATAT-----                   | 276 |
| C28 Cat6   | ATATATATATATATAT-----                 | 281 |
| C9 Cat7    | ATATATATATATAT-----                   | 279 |
| C45 Cat6   | ATATATATATATAT-----                   | 279 |
| C17 Cat7   | ATATATATATATAT-----                   | 279 |
| C37 Cat6   | ATATATATATATAT-----                   | 279 |
| C2 Cat6    | ATATATATATATAT-----                   | 279 |
| C47 Cat7   | ATATATATATATAT-----                   | 279 |
| C11 Cat6   | ATATATATATATATAT-----                 | 280 |
| C64 Cat6   | -TATATATATATATAT-----                 | 277 |
| C50 Cat7   | ATATATATATATAT-----                   | 279 |
| C55 Cat6   | ATATATATATAT-----                     | 277 |
| C33 Cat6   | ATATATATATATAT-----                   | 279 |
| C34 Cat7   | ATATATATATATAT-----                   | 279 |
| C10 Cat6   | ATATATATATATAT-----                   | 279 |
| C32 Cat7   | ATATATATATATAT-----                   | 279 |
| C57 Cat7   | ATATATATATATAT-----                   | 283 |
| C6 Cat6    | ATATATATATATAT-----                   | 283 |
| AY988600Bp | ATATATATATATAT-----                   | 313 |
| C22 Cat7   | ATATATATATATAT-----                   | 281 |
| C46 Cat7   | ATATATATATATAT-----                   | 281 |
| C27 Cat6   | --ATATATATATAT-----                   | 271 |
| C29 Cat6   | ATATATATATATAT-----                   | 279 |
| C19 Cat6   | ATATATATATATAT-----                   | 273 |
| C16 Cat7   | ATATATATATATAT-----                   | 277 |
| C5 Cat7    | ATATATATATATAT-----                   | 279 |
| C66 Cat6   | ATATATATATATAT-----                   | 279 |
| C48 Cat6   | ATATATATATATAT-----                   | 279 |
| C31 Cat7   | ATATATATATA--T-----                   | 277 |
| C17 Cat6   | ----ATATATGTAT-----                   | 269 |
| C61 Cat6   | ATATATATATATAT-----                   | 271 |
| C43 Cat7   | ATATATATATATAT-----                   | 277 |
| C44 Cat6   | ATATATATATATAT-----                   | 279 |
| C60 Cat6   | ATATATATATATAT-----                   | 279 |

Table 18(continued)

|            |                       |     |
|------------|-----------------------|-----|
| C27 Cat7   | ATATATATATATAT-----   | 279 |
| C8 Cat7    | ATATATATATATAT-----   | 279 |
| C24 Cat7   | ATATATATATATAT-----   | 277 |
| C39 Cat7   | ATATATATATATAT-----   | 277 |
| C23 Cat6   | ATATATATATATAT-----   | 277 |
| C16 Cat6   | ATATATATATATAT-----   | 277 |
| C54 Cat7   | ATATATATATATAT-----   | 277 |
| C58 Cat7   | ATATATATATATAT-----   | 277 |
| C53 Cat7   | ATATATATATATAT-----   | 277 |
| C11 Cat7   | ATATATATATATAT-----   | 277 |
| C49 Cat6   | ATATATATATATAT-----   | 277 |
| C41 Cat7   | ATATATATATATAT-----   | 277 |
| C18 Cat7   | ATATATATATATAT-----   | 277 |
| C29 Cat7   | ATATATATATATAT-----   | 277 |
| C48 Cat7   | ATATATATATATAT-----   | 277 |
| C59 Cat7   | ATATATATATATAT-----   | 277 |
| C42 Cat7   | ATATATATATATAT-----   | 277 |
| C26 Cat6   | ATATATATATATAT-----   | 277 |
| C10 Cat7   | ATATATATATATAT-----   | 277 |
| C23 Cat1   | AAAGTAATCTTT-----     | 298 |
| C42 Cat1   | AAAGTAATCTTT-----     | 298 |
| AF499132Bt | AAAGTAATCTTT-----     | 298 |
| AF499130Bm | AAAGTAATCTTT-----     | 298 |
| C36 Cat6   | AAAGTAATCTTT-----     | 298 |
| C7 Cat6    | AAAGTAATCTTT-----     | 298 |
| C12 Cat6   | AAAGTAATCTTT-----     | 298 |
| C47 Cat6   | AAAGTAATCTTT-----     | 300 |
| C58 Cat6   | ATATATATATATAT-----   | 311 |
| C21 Cat6   | ATATATATATATAT-----   | 271 |
| C12 Cat7   | ATATATATATATAT-----   | 274 |
| C3 Cat7    | ATATATATATATAT-----   | 278 |
| C23 Cat7   | ATATATATATATAT-----   | 275 |
| C18 Cat6   | ATATATATATATAT-----   | 269 |
| C49 Cat7   | ATATTTATATATAT-----   | 275 |
| C38 Cat6   | ATAT---ATAT-----      | 271 |
| C42 Cat6   | ATATATATATATAT-----   | 271 |
| C62 Cat7   | ATATATATATATAT-----   | 275 |
| C60 Cat7   | ATATATATATATAT-----   | 277 |
| C25 Cat6   | ATATATATATATAT-----   | 273 |
| C45 Cat7   | ATATATATATATAT-----   | 273 |
| C63 Cat6   | ATATATATATATAT-----   | 275 |
| C26 Cat7   | ATATATATATATATAT----- | 279 |
| C46 Cat6   | ATATATATATATAT-----   | 275 |
| C5 Cat6    | ATATATATATATAT-----   | 271 |
| C22 Cat6   | ATATATATATATAT-----   | 271 |
| C25 Cat7   | ATATATATAT-----       | 273 |
| C44 Cat7   | ATATATATATATAT-----   | 279 |
| C65 Cat6   | ATATATATATATAT-----   | 277 |
| C59 Cat6   | ATATATATATATAT-----   | 277 |
| C1 Cat7    | ATATATATATATATAT----- | 279 |
| C6 Cat7    | ATATATATAT-----       | 273 |
| C7 Cat7    | ATATATATATATAT-----   | 278 |
| C55 Cat7   | ATATATATATATAT-----   | 277 |
| C3 Cat2    | ATATATATATATAT-----   | 275 |
| C3 Cat1    | ATATATATA--T-----     | 273 |
| C50 Cat6   | ATATATATATATAT-----   | 277 |
| C35 Cat7   | ATATATATATATAT-----   | 279 |
| C35 Cat1   | ATATATATA--T-----     | 275 |
| C57 Cat2   | ATATATATGTAT-----     | 271 |
| C46 Cat1   | ATATATATATATAT-----   | 279 |
| C40 Cat6   | ATATATATATATAT-----   | 277 |
| C37 Cat7   | ATATATA---T-----      | 274 |
| C30 Cat6   | ATATA-----T-----      | 270 |
| C56 Cat6   | ATATATATATATAT-----   | 277 |
| C3 Cat6    | ATATATA---T-----      | 273 |

Table 18(continued)

|            |      |                                                              |     |
|------------|------|--------------------------------------------------------------|-----|
| C24        | Cat6 | ATATATATATAT-----                                            | 271 |
| C26        | Cat1 | ATATATATATAT-----                                            | 269 |
| C52        | Cat1 | ATATATACATAT-----                                            | 281 |
| C41        | Cat6 | ATATATATATAT-----                                            | 277 |
| C28        | Cat7 | ATATATATATATATATAT-----                                      | 283 |
| C37        | Cat2 | ATATATATATATAT-----                                          | 281 |
| C21        | Cat2 | ATATATATATA-----                                             | 278 |
| C19        | Cat2 | ATATATATATATAT-----                                          | 281 |
| C5         | Cat1 | ATATATATATA-----                                             | 278 |
| C6         | Cat2 | ATATATATATATA-----                                           | 280 |
| C7         | Cat2 | ATATATATATAT-----                                            | 279 |
| C10        | Cat2 | ATATATATATATACATATATATA-----                                 | 290 |
| C1         | Cat2 | -----                                                        |     |
| C4         | Cat2 | -----                                                        |     |
| C16        | Cat2 | ATATATATATAT-----                                            | 279 |
| C50        | Cat2 | ATATAT-----                                                  | 273 |
| C35        | Cat2 | ATATATATAT-----                                              | 277 |
| C38        | Cat2 | ATATATATATAT-----                                            | 279 |
| C23        | Cat2 | ATATATATATAT-----                                            | 279 |
| C43        | Cat2 | ATATATATAT-----                                              | 277 |
| C22        | Cat2 | ATATATATATATA-----                                           | 280 |
| C9         | Cat2 | ATATATATATAT-----                                            | 279 |
| C36        | Cat2 | ATATAT-----                                                  | 273 |
| C11        | Cat2 | ATATAT-----                                                  | 273 |
| C14        | Cat2 | ATATATATATATA-----                                           | 280 |
| C5         | Cat4 | ATATATATATAT-----                                            | 279 |
| C43        | Cat1 | ATATATATATATA-----                                           | 280 |
| C6         | Cat4 | ATATATATATAT-----                                            | 279 |
| C5         | Cat3 | ATATATATATATATTAAAAAGTAATCTTTCATGAATAAATAATAAAGAAAGATTACAATT | 327 |
| C7         | Cat5 | ATATATATATATT-----                                           | 280 |
| C58        | Cat2 | ATATATATATATA-----                                           | 280 |
| C58        | Cat1 | ATATATATATATA-----                                           | 280 |
| C52        | Cat2 | ATATATATATATATAT-----                                        | 279 |
| C18        | Cat2 | ATATATATATATA--T-----                                        | 277 |
| C41        | Cat2 | ATATATATATAT-----                                            | 275 |
| C20        | Cat2 | ATATATATATATATATATACATATATATATA-----                         | 294 |
| C5         | Cat2 | ATATATATATATATAT-----                                        | 279 |
| C45        | Cat2 | ATATATATATATATATAT-----                                      | 281 |
| C12        | Cat2 | ATATATATATATATATAT-----                                      | 281 |
| C13        | Cat2 | ATATATATATATAT-----                                          | 277 |
| C42        | Cat2 | ATATATATATATAT-----                                          | 277 |
| C33        | Cat2 | ATATATATATATAT-----                                          | 277 |
| C34        | Cat2 | ATATATATATATATATATA-----                                     | 282 |
| C2         | Cat2 | ATATATATATATATATATA-----                                     | 282 |
| C30        | Cat2 | ATATATATAT-----                                              | 273 |
| C40        | Cat2 | ATATATAT-----                                                | 271 |
| C29        | Cat2 | ATATATATAT-----                                              | 273 |
| C25        | Cat2 | ATATATATAT-----                                              | 273 |
| C2         | Cat5 | ATATATATATAT-----                                            | 275 |
| C8         | Cat2 | ATATATATAT-----                                              | 273 |
| AY988599Bm |      | ATATATATATAT-----                                            | 275 |
| C4         | Cat1 | ATATATATATAT-----                                            | 275 |
| C1         | Cat1 | ATATATATATAT-----                                            | 275 |
| C12        | Cat1 | ATATATATATAT-----                                            | 275 |
| C30        | Cat1 | ATATATATATAT-----                                            | 275 |
| C50        | Cat1 | ATATATATATAT-----                                            | 275 |
| C59        | Cat1 | ATATATATATAT-----                                            | 275 |
| C56        | Cat1 | ATATATATATAT-----                                            | 275 |
| C4         | Cat3 | ATATATATATAT-----                                            | 275 |
| C17        | Cat2 | ATATATATAT-----                                              | 273 |
| C2         | Cat1 | ATATATATAT-----                                              | 273 |
| C59        | Cat2 | GTATATATAT-----                                              | 277 |
| C20        | Cat1 | ATATATATAT-----                                              | 269 |
| C53        | Cat1 | ATATATATAT-----                                              | 273 |
| C55        | Cat1 | ATATATATAT-----                                              | 273 |

Table 18(continued)

|            |      |                                                      |     |
|------------|------|------------------------------------------------------|-----|
| C38        | Cat1 | ATATATATAT-----                                      | 273 |
| C3         | Cat3 | ATATATATAT-----                                      | 273 |
| C33        | Cat1 | ATATATATAT-----                                      | 273 |
| C19        | Cat1 | ATATATATAT-----                                      | 273 |
| C11        | Cat1 | ATATATATAT-----                                      | 273 |
| C21        | Cat1 | ATATATATAT-----                                      | 273 |
| C2         | Cat4 | ATATATATAT-----                                      | 273 |
| C56        | Cat2 | ATATATAT-----                                        | 271 |
| C60        | Cat2 | ATATATAT-----                                        | 275 |
| C3         | Cat5 | ATATATAT-----                                        | 265 |
| C5         | Cat5 | ATATATAT-----                                        | 267 |
| C3         | Cat4 | ATATATAT-----                                        | 267 |
| C1         | Cat5 | ATATATATAT-----                                      | 271 |
| C6         | Cat1 | ATATATATAT-----                                      | 271 |
| C57        | Cat1 | ATATATAT-----                                        | 271 |
| C22        | Cat1 | ATATATATATAT-----                                    | 275 |
| C39        | Cat1 | ATATATATAT-----                                      | 271 |
| C27        | Cat1 | ATATATATATATAT-----                                  | 277 |
| C24        | Cat1 | ATATATATATAT-----                                    | 275 |
| C31        | Cat2 | ATATATATATAT-----                                    | 275 |
| C10        | Cat1 | ATATATATATATAT-----                                  | 277 |
| C49        | Cat1 | ATATATATATATAT-----                                  | 277 |
| C7         | Cat4 | ATATATATATATAT-----                                  | 277 |
| C1         | Cat4 | ATATATATATATAT-----                                  | 277 |
| C45        | Cat1 | ATATATAT-----                                        | 267 |
| C6         | Cat5 | ATATATATATAT-----                                    | 279 |
| C17        | Cat1 | ATATATATAT-----                                      | 273 |
| C6         | Cat3 | ATATATATAT-----                                      | 273 |
| C9         | Cat1 | ATATATAT-----                                        | 269 |
| C15        | Cat1 | ATATATAT-----                                        | 269 |
| C4         | Cat4 | ATATATAT-----                                        | 269 |
| C4         | Cat5 | ATATATAT-----                                        | 269 |
| C8         | Cat1 | ATATATAT-----                                        | 269 |
| C2         | Cat3 | ATATATATATAT-----                                    | 279 |
| C16        | Cat1 | ATATATATATAT-----                                    | 279 |
| C1         | Cat3 | ATATATATATATATAT-----                                | 283 |
| C31        | Cat1 | ATATATATATATATATATATATA-----                         | 290 |
| C25        | Cat1 | ATATATATATATAT-----                                  | 281 |
| C29        | Cat1 | ATATATATATATAT-----                                  | 281 |
| C46        | Cat2 | ATATATATATATGT-----                                  | 284 |
| C44        | Cat1 | ATATATATATATAT-----                                  | 281 |
| C40        | Cat1 | ATATATATATAT-----                                    | 273 |
| C51        | Cat2 | ATATATATATAT-----                                    | 273 |
| C26        | Cat2 | ATATATATATAT-----                                    | 273 |
| C14        | Cat1 | ATATATATATAT-----                                    | 263 |
| C54        | Cat1 | ATATATATATAT-----                                    | 275 |
| C56        | Cat7 | ATATATATATTT-----                                    | 275 |
| C32        | Cat1 | ATATATATATAT-----                                    | 275 |
| C32        | Cat2 | ATATATATATAAAA-----                                  | 281 |
| C48        | Cat2 | TATTTTTCATGA-----                                    | 270 |
| C49        | Cat2 | TATTATAAATTT-----                                    | 272 |
| C27        | Cat2 | ATATATATATAT-----                                    | 279 |
| C15        | Cat2 | ATATATATATAT-----                                    | 285 |
| C55        | Cat2 | ACATATATCTCT-----                                    | 266 |
| AF217800Di |      | AGCTTAATTGATGATGATTGCTCAATTAAGTAGAC-----             | 323 |
|            |      |                                                      |     |
| C28        | Cat1 | -----TAAAAAGGTATTTTTCTGGATTAA-----TTATTAAGGAA-GGTT   | 312 |
| C28        | Cat2 | -----TAAAAAGTTATTTTTCTGGATTAA-----TTATAAAGGAA-GGTT   | 321 |
| C1         | Cat6 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAGTAAAGAAA-GATT | 318 |
| C19        | Cat7 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 318 |
| C39        | Cat6 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 318 |
| C52        | Cat7 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 318 |
| C21        | Cat7 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 318 |
| C14        | Cat7 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 318 |

[illegible]

Table 18(continued)

|            |                                                        |     |
|------------|--------------------------------------------------------|-----|
| C41 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C18 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C29 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C48 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C59 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C42 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C26 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C10 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C23 Cat1   | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| C42 Cat1   | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| AF499132Bt | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| AF499130Bm | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| C36 Cat6   | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| C7 Cat6    | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| C12 Cat6   | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 333 |
| C47 Cat6   | -----CATGAATAAATATTC-----ATAA-----ATAATAAAGAAA-GATT    | 335 |
| C58 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 351 |
| C21 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 311 |
| C12 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 314 |
| C3 Cat7    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 318 |
| C23 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C18 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 309 |
| C49 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C38 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 311 |
| C42 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 311 |
| C62 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C60 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C25 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 313 |
| C45 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 313 |
| C63 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C26 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 319 |
| C46 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C5 Cat6    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 311 |
| C22 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 311 |
| C25 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 313 |
| C44 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 319 |
| C65 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C59 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C1 Cat7    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 319 |
| C6 Cat7    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 313 |
| C7 Cat7    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 318 |
| C55 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C3 Cat2    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C3 Cat1    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 313 |
| C50 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C35 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 319 |
| C35 Cat1   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 315 |
| C57 Cat2   | -----TAAATCGTGATTTTCATT-AATAA-----ATAATAAAGAAA-GATT    | 311 |
| C46 Cat1   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 319 |
| C40 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C37 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 314 |
| C30 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 310 |
| C56 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C3 Cat6    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 313 |
| C24 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 311 |
| C26 Cat1   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 309 |
| C52 Cat1   | -----TAAAAAATAATCTTCTCCG-ACTAA-----TTACCCCCAAA-TACA    | 321 |
| C41 Cat6   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 317 |
| C28 Cat7   | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 323 |
| C37 Cat2   | -----ATTAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 323 |
| C21 Cat2   | -----TTAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT  | 319 |
| C19 Cat2   | -----ATTAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT | 323 |
| C5 Cat1    | -----TTAAAAAGTAATCTTTCATG-AATGA-----ATAATAAAGAAA-GATT  | 319 |
| C6 Cat2    | -----TTAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGGAA-GATT  | 321 |
| C7 Cat2    | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT   | 319 |

Table 18(continued)

|            |      |                                                         |     |
|------------|------|---------------------------------------------------------|-----|
| C10        | Cat2 | -----TATTAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 333 |
| C1         | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 301 |
| C4         | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 307 |
| C16        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C50        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C35        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C38        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C23        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C43        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C22        | Cat2 | -----TATTAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 323 |
| C9         | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C36        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C11        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C14        | Cat2 | -----TATCAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 323 |
| C5         | Cat4 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C43        | Cat1 | -----AATGTATACTTTTCATG-AATAA-----ATTCTTTCGAGA-GATT      | 317 |
| C6         | Cat4 | -----                                                   |     |
| C5         | Cat3 | ATTTATTTTAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT | 375 |
| C7         | Cat5 | -----AAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT     | 319 |
| C58        | Cat2 | -----TTAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT   | 321 |
| C58        | Cat1 | -----TTAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT   | 321 |
| C52        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C18        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C41        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C20        | Cat2 | -----TTAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT   | 335 |
| C5         | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 319 |
| C45        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 321 |
| C12        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 321 |
| C13        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C42        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C33        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C34        | Cat2 | -----TTAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT   | 323 |
| C2         | Cat2 | -----TTAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT   | 323 |
| C30        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C40        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 311 |
| C29        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C25        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C2         | Cat5 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C8         | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| AY988599Bm |      | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C4         | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C1         | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C12        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C30        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C50        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C59        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C56        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C4         | Cat3 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C17        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C2         | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C59        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 317 |
| C20        | Cat1 | -----TAAAAAGTTATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 309 |
| C53        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C55        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C38        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C3         | Cat3 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C33        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C19        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C11        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C21        | Cat1 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C2         | Cat4 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 313 |
| C56        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 311 |
| C60        | Cat2 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 315 |
| C3         | Cat5 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 305 |
| C5         | Cat5 | -----TAAAAAGTAATCTTTTCATG-AATAA-----ATAATAAGAAA-GATT    | 307 |

Table 18(continued)

|            |      |                                                            |     |
|------------|------|------------------------------------------------------------|-----|
| C3         | Cat4 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 307 |
| C1         | Cat5 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 311 |
| C6         | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 311 |
| C57        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 311 |
| C22        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 315 |
| C39        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 311 |
| C27        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 317 |
| C24        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 315 |
| C31        | Cat2 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 315 |
| C10        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 317 |
| C49        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 317 |
| C7         | Cat4 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 317 |
| C1         | Cat4 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 317 |
| C45        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 307 |
| C6         | Cat5 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 319 |
| C17        | Cat1 | -----TAAGAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 313 |
| C6         | Cat3 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 313 |
| C9         | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 309 |
| C15        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 309 |
| C4         | Cat4 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 309 |
| C4         | Cat5 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 309 |
| C8         | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 309 |
| C2         | Cat3 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 319 |
| C16        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 319 |
| C1         | Cat3 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 323 |
| C31        | Cat1 | -----TATTAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 333 |
| C25        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 321 |
| C29        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAA-GATT       | 321 |
| C46        | Cat2 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATTATGTCATGATT       | 325 |
| C44        | Cat1 | -----TAAAAAGTAATCTTTCACG-CATAA-----ATAATAAAGAAA-GATT       | 321 |
| C40        | Cat1 | -----TAAAAAGTAATCTTTCATG-AATAA-----ATAATAAAGAAAG-GATG      | 313 |
| C51        | Cat2 | -----TAAAAAGTAATCTTTCAGG-AATAA-----ATAATAAGGAAA-GATT       | 313 |
| C26        | Cat2 | -----TAAAAAGTAATCTTTCAGG-AATAA-----ATAATAAGGAAA-GATT       | 313 |
| C14        | Cat1 | -----TAAAAAGTAATCTTTCAGG-AATAA-----TTAATAAGGAAAG-GATT      | 303 |
| C54        | Cat1 | -----TAAAAAG--TTCTCTCTCG-TGAATAA-----ATTATAGAGAGA-GATC     | 315 |
| C56        | Cat7 | -----TAAAAAG--ATCTCTTTCG-TGTATAT-----ATTATAGAGAGA-GATC     | 315 |
| C32        | Cat1 | -----TAAAAAGTGATCTTTCCTCG-AGTAAAT-----ATTAAAGAGAGA-GTTC    | 317 |
| C32        | Cat2 | -----AAAATGTTCTCTCTCAAG-AATAA-----ATAAAAAAGAAA--GTT        | 319 |
| C48        | Cat2 | -----TATAAAGTATTCTTTCATG-AATAAC-----ATAATAATGAAGAGATT      | 312 |
| C49        | Cat2 | -----TAATAAGTAATCTTTCATGGAATAAT-----A-AATAAAGAAAG-GATT     | 313 |
| C27        | Cat2 | -----TAAAAAGGTATTCTTTCAGG-AATAA-----TTAATAAGGAAAG-GATT     | 319 |
| C15        | Cat2 | -----TAAAAAGTGTTTTTCTCG-GGTAAAT-----ATAAAAAAGGAGGGTTCC     | 328 |
| C55        | Cat2 | -----TAAAAAGGCATCTTTCATGAATGCATATTCTGCCATGATCCCGTAAAGATC   | 318 |
| AF217800Di |      | -----TTAATAAGCATTTTAGCTAG-TATGCTACCAACAAAATAATACACACACACAT | 375 |
| C28        | Cat1 | TCCAT-TTATTTTTT-----                                       | 326 |
| C28        | Cat2 | TCCAT-TTTTTATTT-----                                       | 335 |
| C1         | Cat6 | ACAAT-TATTTATTT-----                                       | 332 |
| C19        | Cat7 | ACAAT-TATTTATTT-----                                       | 332 |
| C39        | Cat6 | ACAAT-TATTTATTT-----                                       | 332 |
| C52        | Cat7 | ACAAT-TATTTATTT-----                                       | 332 |
| C21        | Cat7 | ACAAT-TATTTATTT-----                                       | 332 |
| C14        | Cat7 | ACAAT-TATTTATTT-----                                       | 332 |
| C61        | Cat7 | ACAAT-TATTTATTT-----                                       | 332 |
| C4         | Cat7 | ACAAT-TATTTATTT-----                                       | 332 |
| C4         | Cat6 | ACAAT-TATTTATTT-----                                       | 330 |
| C2         | Cat7 | ACAAT-TATTTATTT-----                                       | 334 |
| C53        | Cat6 | ACAAT-TATTTATTT-----                                       | 331 |
| C8         | Cat6 | ACAAT-TATTTATTT-----                                       | 331 |
| C43        | Cat6 | ACAAT-TATTTATTT-----                                       | 333 |
| C62        | Cat6 | ACAAT-TATTTATTT-----                                       | 336 |
| C20        | Cat7 | ACAAT-TATTTATTT-----                                       | 336 |
| C35        | Cat6 | ACAAT-TATTTATTT-----                                       | 331 |
| C14        | Cat6 | ACAAT-TATTTATTT-----                                       | 331 |

Table 18(continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C15 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C36 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C30 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C13 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C15 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C54 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C9 Cat6    | ACAAT-TATTTATTT-----                                          | 331 |
| C33 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C31 Cat6   | ACAAT-TATTTATTT-----                                          | 326 |
| C57 Cat6   | ACAAT-TATTTATTT-----                                          | 330 |
| C28 Cat6   | ACAAT-TATTTATTT-----                                          | 335 |
| C9 Cat7    | ACAAT-TATTTATTT-----                                          | 333 |
| C45 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C17 Cat7   | ACAAT-TATTTATTT-----                                          | 333 |
| C37 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C2 Cat6    | ACAAT-TATTTATTT-----                                          | 333 |
| C47 Cat7   | ACAAT-TATTTATTT-----                                          | 333 |
| C11 Cat6   | ACAAT-TATTTATTT-----                                          | 334 |
| C64 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C50 Cat7   | ACAAT-TATTTATTT-----                                          | 333 |
| C55 Cat6   | -CAAT-TATTTATTT-----                                          | 330 |
| C33 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C34 Cat7   | ACAAT-TATTTATTT-----                                          | 333 |
| C10 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C32 Cat7   | ACAAT-TATTTATTT-----                                          | 333 |
| C57 Cat7   | ACAAT-TATTTATTT-----                                          | 337 |
| C6 Cat6    | ACAAT-TATTTATTT-----                                          | 337 |
| AY988600Bp | ATAAT-TATTCATTT-----                                          | 377 |
| C22 Cat7   | ACAAT-TATTTATTT-----                                          | 335 |
| C46 Cat7   | ACAAT-TATTTATTT-----                                          | 335 |
| C27 Cat6   | ACAAT-TATTTATTT-----                                          | 325 |
| C29 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C19 Cat6   | ACAAT-TATTTATTT-----                                          | 327 |
| C16 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C5 Cat7    | ACAAT-TATTTATTT-----                                          | 333 |
| C66 Cat6   | ACAAT-TATTTATTTTAAAAAGTAATCTTTCATGAATAAATAATAAAAGAAAGATTACAAT | 378 |
| C48 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C31 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C17 Cat6   | ACAAT-TATTTATTT-----                                          | 323 |
| C61 Cat6   | ACAAT-TATTTATTT-----                                          | 325 |
| C43 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C44 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C60 Cat6   | ACAAT-TATTTATTT-----                                          | 333 |
| C27 Cat7   | ACAAT-TATTTATTT-----                                          | 333 |
| C8 Cat7    | ACAAT-TATTTATTT-----                                          | 333 |
| C24 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C39 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C23 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C16 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C54 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C58 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C53 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C11 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C49 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C41 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C18 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C29 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C48 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C59 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C42 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C26 Cat6   | ACAAT-TATTTATTT-----                                          | 331 |
| C10 Cat7   | ACAAT-TATTTATTT-----                                          | 331 |
| C23 Cat1   | ACAAT-TATTCATTT-----                                          | 347 |
| C42 Cat1   | ACAAT-TATTCATTT-----                                          | 347 |
| AF499132Bt | ACAAT-TATTCATTT-----                                          | 347 |

Table 18(continued)

|            |                      |     |
|------------|----------------------|-----|
| AF499130Bm | ACAAT-TATTCATTT----- | 347 |
| C36 Cat6   | ACAAT-TATTCATTT----- | 347 |
| C7 Cat6    | ACAAT-TATTCATTT----- | 347 |
| C12 Cat6   | ACAAT-TATTCATTT----- | 347 |
| C47 Cat6   | ACAAT-TATTCATTT----- | 349 |
| C58 Cat6   | ACAAT-TATTTATTT----- | 365 |
| C21 Cat6   | ACAAT-TATTTATTT----- | 325 |
| C12 Cat7   | ACAAT-TATTTATTT----- | 328 |
| C3 Cat7    | ACAAT-TATTCATTT----- | 332 |
| C23 Cat7   | ACAAT-TATTTATTT----- | 329 |
| C18 Cat6   | ACAAT-TATTTATTT----- | 323 |
| C49 Cat7   | ACAAT-TATTTATTT----- | 329 |
| C38 Cat6   | ACAAT-TATTTATTT----- | 325 |
| C42 Cat6   | ACAAT-TATTTATTT----- | 325 |
| C62 Cat7   | ACCAT-TTTTTATTT----- | 329 |
| C60 Cat7   | ACCAT-TATTTATTT----- | 331 |
| C25 Cat6   | ACAAT-TATTTATTT----- | 327 |
| C45 Cat7   | ACAAT-TATTTATTT----- | 327 |
| C63 Cat6   | ACAAT-TATTTATTT----- | 329 |
| C26 Cat7   | ACAAT-TATTTATTT----- | 333 |
| C46 Cat6   | ACAAT-TATTTATTT----- | 329 |
| C5 Cat6    | ACAAT-TATTTATTT----- | 325 |
| C22 Cat6   | ACAAT-TATTTATTT----- | 325 |
| C25 Cat7   | ACAAT-TATTTATTT----- | 327 |
| C44 Cat7   | ACAAT-TATTTATTT----- | 333 |
| C65 Cat6   | ACAAT-TATTTATTT----- | 331 |
| C59 Cat6   | ACAAT-TATTTATTT----- | 331 |
| C1 Cat7    | ACAAT-TATTTATTT----- | 333 |
| C6 Cat7    | ACAAT-TATTTATTT----- | 327 |
| C7 Cat7    | ACAAT-TATTTATTT----- | 332 |
| C55 Cat7   | ACAAT-TATTTATTT----- | 331 |
| C3 Cat2    | ACAAT-TATTTATTT----- | 329 |
| C3 Cat1    | ACAAT-TATTTATTT----- | 327 |
| C50 Cat6   | ACAAT-TATTTATTT----- | 331 |
| C35 Cat7   | ACAAT-TATTTATTT----- | 333 |
| C35 Cat1   | ACAAT-TATTTATTT----- | 329 |
| C57 Cat2   | ACAAT-TATTCATTT----- | 325 |
| C46 Cat1   | ACAAT-TATTTATTT----- | 333 |
| C40 Cat6   | ACAAT-TATTTATTT----- | 331 |
| C37 Cat7   | ACAAT-TATTTATTT----- | 328 |
| C30 Cat6   | ACAAT-TATTTATTT----- | 324 |
| C56 Cat6   | ACAAT-TATTTATTT----- | 331 |
| C3 Cat6    | ACAAT-TATTTATTT----- | 327 |
| C24 Cat6   | ACAAT-TATTTATTT----- | 325 |
| C26 Cat1   | ACAAT-TATTTATTT----- | 323 |
| C52 Cat1   | ACAAT-TATTTATTA----- | 335 |
| C41 Cat6   | ACAAT-TATTTATTT----- | 331 |
| C28 Cat7   | ACAAT-TATTTATTT----- | 337 |
| C37 Cat2   | ACAAT-TATTTATTT----- | 337 |
| C21 Cat2   | ACAAT-TATTTATTT----- | 333 |
| C19 Cat2   | ACAAT-TATTTATTT----- | 337 |
| C5 Cat1    | ACTAT-TATTTATTT----- | 333 |
| C6 Cat2    | ACAAT-TATTTATTT----- | 335 |
| C7 Cat2    | ACAAT-TATTTATTT----- | 333 |
| C10 Cat2   | ACAAT-TATTTATTT----- | 347 |
| C1 Cat2    | ACAAT-TATTTATTT----- | 315 |
| C4 Cat2    | ACAAT-TATTTATTT----- | 321 |
| C16 Cat2   | ACAAT-TATTTATTT----- | 333 |
| C50 Cat2   | ACAAT-TATTTATTT----- | 327 |
| C35 Cat2   | ACAAT-TATTTATTT----- | 331 |
| C38 Cat2   | ACAAT-TATTTATTT----- | 333 |
| C23 Cat2   | ACAAT-TATTTATTT----- | 333 |
| C43 Cat2   | ACAAT-TATTTATTT----- | 331 |
| C22 Cat2   | ACAAT-TATTTATTT----- | 337 |
| C9 Cat2    | ACAAT-TATTTATTT----- | 333 |

Table 18(continued)

|            |      |                      |     |
|------------|------|----------------------|-----|
| C36        | Cat2 | ACAAT-TATTTATTT----- | 327 |
| C11        | Cat2 | ACAAT-TATTTATTT----- | 327 |
| C14        | Cat2 | ACAAT-TATTTATTT----- | 337 |
| C5         | Cat4 | ACAAT-TATTTATTT----- | 333 |
| C43        | Cat1 | ACAAT-TATTTATCA----- | 331 |
| C6         | Cat4 | -----                |     |
| C5         | Cat3 | ACAAT-TATTTATTT----- | 389 |
| C7         | Cat5 | ACAAT-TATTTATTT----- | 333 |
| C58        | Cat2 | ACAAT-TATTTATTT----- | 335 |
| C58        | Cat1 | ACAAT-TATTTATTT----- | 335 |
| C52        | Cat2 | ACAAT-TATTTATTT----- | 333 |
| C18        | Cat2 | ACAAT-TATTTATTT----- | 331 |
| C41        | Cat2 | ACAAT-TATTTATTT----- | 329 |
| C20        | Cat2 | ACAAT-TATTTATTT----- | 349 |
| C5         | Cat2 | ACAAT-TATTTATTT----- | 333 |
| C45        | Cat2 | ACAAT-TATTTATTT----- | 335 |
| C12        | Cat2 | ACAAT-TATTTATTT----- | 335 |
| C13        | Cat2 | ACAAT-TATTTATTT----- | 331 |
| C42        | Cat2 | ACAAT-TATTTATTT----- | 331 |
| C33        | Cat2 | ACAAT-TATTTATTT----- | 331 |
| C34        | Cat2 | ACAAT-TATTTATTT----- | 337 |
| C2         | Cat2 | ACAAT-TATTTATTT----- | 337 |
| C30        | Cat2 | ACAAT-TATTTATTT----- | 327 |
| C40        | Cat2 | ACAAT-TATTTATTT----- | 325 |
| C29        | Cat2 | ACAAT-TATTTATTT----- | 327 |
| C25        | Cat2 | ACAAT-TATTTATTT----- | 327 |
| C2         | Cat5 | ACAAT-TATTTATTT----- | 329 |
| C8         | Cat2 | ACAAT-TATTTATTT----- | 327 |
| AY988599Bm |      | ACAAT-TATTTATTT----- | 329 |
| C4         | Cat1 | ACAAC-CATTTATTT----- | 329 |
| C1         | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C12        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C30        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C50        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C59        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C56        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C4         | Cat3 | ACAAT-TATTTATTT----- | 329 |
| C17        | Cat2 | ACAAT-TATTTATTT----- | 327 |
| C2         | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C59        | Cat2 | ACAAT-TATTTATTT----- | 331 |
| C20        | Cat1 | ACAAT-TATTTATTT----- | 323 |
| C53        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C55        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C38        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C3         | Cat3 | ACAAT-TATTTATTT----- | 327 |
| C33        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C19        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C11        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C21        | Cat1 | ACAAT-TATTTATTT----- | 327 |
| C2         | Cat4 | ACAAT-TATTTATTT----- | 327 |
| C56        | Cat2 | ACAAT-TATTTATTT----- | 325 |
| C60        | Cat2 | ACAAT-TATTTATCT----- | 329 |
| C3         | Cat5 | ACAAT-TATTTATTT----- | 319 |
| C5         | Cat5 | ACAAT-TATTTATTT----- | 321 |
| C3         | Cat4 | ACAAT-TATTTATTT----- | 321 |
| C1         | Cat5 | ACAAT-TATTTATTT----- | 325 |
| C6         | Cat1 | ACAAT-TATTTATTT----- | 325 |
| C57        | Cat1 | ACAAT-TATTTATTT----- | 325 |
| C22        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C39        | Cat1 | ACAAT-TATTTATTT----- | 325 |
| C27        | Cat1 | ACAAT-TATTTATTT----- | 331 |
| C24        | Cat1 | ACAAT-TATTTATTT----- | 329 |
| C31        | Cat2 | ACAAT-TATTTATTT----- | 329 |
| C10        | Cat1 | ACAAT-TATTTATTT----- | 331 |
| C49        | Cat1 | ACAAT-TATTTATTT----- | 331 |

Table 18(continued)

|            |      |                                                            |     |
|------------|------|------------------------------------------------------------|-----|
| C7         | Cat4 | ACAAT-TATTTATTT-----                                       | 331 |
| C1         | Cat4 | ACAAT-TATTTATTT-----                                       | 331 |
| C45        | Cat1 | ACAAT-TATTTATTT-----                                       | 321 |
| C6         | Cat5 | ACAAT-TATTTATTT-----                                       | 333 |
| C17        | Cat1 | ACAAT-TATTTATTT-----                                       | 327 |
| C6         | Cat3 | ACAAT-TATTTATTT-----                                       | 327 |
| C9         | Cat1 | ACAAT-TATTTATTT-----                                       | 323 |
| C15        | Cat1 | ACAAT-TATTTATTT-----                                       | 323 |
| C4         | Cat4 | ACAAT-TATTTATTT-----                                       | 323 |
| C4         | Cat5 | ACAAT-TATTTATTT-----                                       | 323 |
| C8         | Cat1 | ACAAT-TATTTATTT-----                                       | 323 |
| C2         | Cat3 | ACAAT-TATTTATTT-----                                       | 333 |
| C16        | Cat1 | ACAAT-TATTTATTT-----                                       | 333 |
| C1         | Cat3 | ACAAT-TATTTATTT-----                                       | 337 |
| C31        | Cat1 | ACAAT-TATTTATTT-----                                       | 347 |
| C25        | Cat1 | ACAAT-TATTTATTT-----                                       | 335 |
| C29        | Cat1 | ACAAT-TATTTATTT-----                                       | 335 |
| C46        | Cat2 | ACAAT-TAATTAAAT-----                                       | 339 |
| C44        | Cat1 | ACAAT-TATTTATTT-----                                       | 335 |
| C40        | Cat1 | ACAAT-TATTTATTT-----                                       | 327 |
| C51        | Cat2 | ACAAT-TATTTATTT-----                                       | 327 |
| C26        | Cat2 | ACAAT-TATTTATTT-----                                       | 327 |
| C14        | Cat1 | CCAAT-TATTTATTT-----                                       | 317 |
| C54        | Cat1 | ACTAT-TATTTATTT-----                                       | 329 |
| C56        | Cat7 | ACTTT-TATTTTATTT-----                                      | 329 |
| C32        | Cat1 | ACTTT-TTATTTATTT-----                                      | 331 |
| C32        | Cat2 | CCCAT-TTTTTTTTTTT-----                                     | 335 |
| C48        | Cat2 | ACAAC-TATTATTTT-----                                       | 326 |
| C49        | Cat2 | ACAAC-TATTTATTT-----                                       | 327 |
| C27        | Cat2 | CCAAT-TATTTATTT-----                                       | 333 |
| C15        | Cat2 | ACATT-TTTTTTTTTTT-----                                     | 343 |
| C55        | Cat2 | ACATCATGTTCTCTTAT-----                                     | 336 |
| AF217800Di |      | AC-ATACAATAATATGATATAATTGTTATTTATAATAATTTTT-----           | 417 |
|            |      |                                                            |     |
| C28        | Cat1 | -----TTTtagccatggatt--TACTTAATGGTTGGTTGGTTT----GGTGGTAA    | 370 |
| C28        | Cat2 | -----ATTAAGCCATGATTT--ACCTTAATGGTTGTTTGGTTT----GGTGGTAA    | 379 |
| C1         | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C19        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C39        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C52        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C21        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C14        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C61        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C4         | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 376 |
| C4         | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 374 |
| C2         | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 378 |
| C53        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C8         | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C43        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 377 |
| C62        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 380 |
| C20        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 380 |
| C35        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C14        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C15        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C36        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C30        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C13        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C15        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C54        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C9         | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C33        | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 375 |
| C31        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 370 |
| C57        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 374 |
| C28        | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGGTTTGGTTT----TGTTGTTAA | 379 |

Table 18(continued)

|            |                                                              |     |
|------------|--------------------------------------------------------------|-----|
| C9 Cat7    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C45 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C17 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C37 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C2 Cat6    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C47 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C11 Cat6   | -----ATTATGCGTTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 378 |
| C64 Cat6   | -----ATTATGCGTTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C50 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C55 Cat6   | -----ATTATGCATTGA-TC--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 374 |
| C33 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C34 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C10 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C32 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C57 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C6 Cat6    | -----AATATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 381 |
| AY988600Bp | -----ATTATGCATTGA-TT--TACTATATTGTTTGTTTGTTTGTTTCGTTGTTAA     | 425 |
| C22 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 379 |
| C46 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 379 |
| C27 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 369 |
| C29 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C19 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 371 |
| C16 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C5 Cat7    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C66 Cat6   | TATTTATTTATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA | 431 |
| C48 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C31 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C17 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 367 |
| C61 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 369 |
| C43 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C44 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C60 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C27 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C8 Cat7    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 377 |
| C24 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C39 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C23 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C16 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C54 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C58 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C53 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C11 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C49 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C41 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C18 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C29 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C48 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C59 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C42 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C26 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C10 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 375 |
| C23 Cat1   | -----ATTATGCATTGA-TT--TACTTTACTGTTTGTTTGTTT----CGTTGTTAA     | 391 |
| C42 Cat1   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----CGTTGTTAA     | 391 |
| AF499132Bt | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----CGTTGTTAA     | 391 |
| AF499130Bm | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----CGTTGTTAA     | 391 |
| C36 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTCGTTT----CGTTGTTAA    | 391 |
| C7 Cat6    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTCGTTT----CGTTGTTAA    | 391 |
| C12 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTCGTTT----CGTTGTTAA    | 391 |
| C47 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTCGTTT----CGTTGTTAA    | 393 |
| C58 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 409 |
| C21 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 369 |
| C12 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 372 |
| C3 Cat7    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 376 |
| C23 Cat7   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 373 |
| C18 Cat6   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 367 |

Table 18(continued)

|     |      |                                                            |     |
|-----|------|------------------------------------------------------------|-----|
| C49 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 373 |
| C38 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 369 |
| C42 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 369 |
| C62 | Cat7 | -----TTTATGCATTGA-TT--TACTTTATTGCTTGTTTGTTGTT----TGTTGTTAA | 373 |
| C60 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGGTTGGTTGGTT----TGGTGGTAA   | 375 |
| C25 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGCTTGTTT----TGTTGTTAA   | 371 |
| C45 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C63 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGCTGTTAA   | 373 |
| C26 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C46 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 373 |
| C5  | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 369 |
| C22 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 369 |
| C25 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C44 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTGTT----TGTTGTTAA | 377 |
| C65 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C59 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C1  | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C6  | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C7  | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 376 |
| C55 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C3  | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 373 |
| C3  | Cat1 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C50 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C35 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C35 | Cat1 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 373 |
| C57 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----CGTTGTTAA   | 369 |
| C46 | Cat1 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C40 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C37 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 372 |
| C30 | Cat6 | -----ATTATGCATTGA-TT--TGCTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 368 |
| C56 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C3  | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C24 | Cat6 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 369 |
| C26 | Cat1 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 367 |
| C52 | Cat1 | -----ATCATGCATTGACTT--TCCTCCATTGTTTGATTAGTT----ATCATGAAA   | 380 |
| C41 | Cat6 | -----ATTATGCATTGA-CT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C28 | Cat7 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 381 |
| C37 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 381 |
| C21 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C19 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 381 |
| C5  | Cat1 | -----ATTATGCATTGA-TT--GACTTTATTGATTGTTTGTTT----GGTTGGTAA   | 377 |
| C6  | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 379 |
| C7  | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C10 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 391 |
| C1  | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTATTTGTTT----TGTTGTTAA   | 359 |
| C4  | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----GGTTGTTAA   | 365 |
| C16 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C50 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C35 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C38 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C23 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C43 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 375 |
| C22 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 381 |
| C9  | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C36 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C11 | Cat2 | -----ATTATGCATTGA-TT--TACTTTACTGTTTGTTTGTTT----TGTTGTTAA   | 371 |
| C14 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 381 |
| C5  | Cat4 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C43 | Cat1 | -----ATTATGCATTGA-TT--TACTTTATTGTTGGTTTGTTT----TGTTGTTAA   | 375 |
| C6  | Cat4 | -----TATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA     | 321 |
| C5  | Cat3 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 433 |
| C7  | Cat5 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |
| C58 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 379 |
| C58 | Cat1 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 379 |
| C52 | Cat2 | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTTTGTTT----TGTTGTTAA   | 377 |

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[illegible]

Table 18(continued)

|            |                                                              |     |
|------------|--------------------------------------------------------------|-----|
| C2 Cat3    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTGTTT----TGTGTTAA        | 377 |
| C16 Cat1   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTGTTT----TGTGTTAA        | 377 |
| C1 Cat3    | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTGTTT----TGTGTTAA        | 381 |
| C31 Cat1   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTGTTT----TGTGTTAA        | 391 |
| C25 Cat1   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTGTTT----TGTGTTAA        | 379 |
| C29 Cat1   | -----ATTATGCATTGA-TT--TACTTTATTGTTTGTGTTT----TGTGTTAA        | 379 |
| C46 Cat2   | -----ATTCTGCATTGA-TT--TACTTTACAGTGAGTTTGTGTTT----TGTGTTAA    | 383 |
| C44 Cat1   | -----TTTATGCATTGA-TT--TACTTTACTGTTTGTGTTTGTGTTT----TGTGTTCA  | 379 |
| C40 Cat1   | -----ATTATGCAGCGA-TT--TACTTTATTGTTGGTTTGTGTTT----TGTCGTTAA   | 371 |
| C51 Cat2   | -----ATTAGGCATGGA-TT--TACTTTATGGTTGGTTGGTTT----GGTGGTTAA     | 371 |
| C26 Cat2   | -----ATTAGGCAGGGA-TT--TACTTTATGGTTTGTGTTTGTGTTT----GGGTGTTAA | 371 |
| C14 Cat1   | -----ATTAGGCATGGA-TT--TACTTTATTGTTTGTGTGTTG----TGGTGTTAA     | 361 |
| C54 Cat1   | -----AATACGCAGAGA-TT--CACTATAGTGTGTGTGTGTTG----TGGTGAAAA     | 373 |
| C56 Cat7   | -----AATGCGCAGAGA-TA--CACTATAGTGTGTGTGTGTGTTG----TGGTGAAAA   | 373 |
| C32 Cat1   | -----TATGCACAGAGT-TA--CTTTATAGTGTGTGTGTGTGTTG----TGGTGAAAA   | 375 |
| C32 Cat2   | -----ACACCGCATTGA-TT--TACTTTATTGTTTGTGTTTGTGTTT----TGTGAAAT  | 379 |
| C48 Cat2   | -----ATTATGCAGTGA-TT--TACTTTATTGTTTGTGTTGTTT----TGTGTTAA     | 370 |
| C49 Cat2   | -----ATTATGCATCGA-TT--TACTTTATTGTTTGTGTTGTTT----TGTGTTAA     | 371 |
| C27 Cat2   | -----ATTAGGCATGGA-TT--TACTTTATGGTTGGTTGGTTT----GGTGGTTAA     | 377 |
| C15 Cat2   | -----TTGCCGCGTGAGTTT--CCTTATATTGTTTGTGTTTTTTG-----TGGTGA     | 385 |
| C55 Cat2   | -----TTCACATATGAGACTACCACCTGATGACTGTGTTGTATCCCGTGCTCCAAA     | 387 |
| AF217800Di | --CAATAACTCTAAGCGGGGATC--ACCTGGCTCGTGGATCGATGAAGAACGCAGCTAG  | 473 |
|            |                                                              |     |
| C28 Cat1   | AAGGTTTCAAAT----TAAAAGCCAG-GTTTT-----TGGAACCTTTA-AATTAACCAAT | 419 |
| C28 Cat2   | AAGGTTCAAAT----AAAAAGCCAG-GTTTT-----TGGAACCTTTA-AATTAACCAAT  | 428 |
| C1 Cat6    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C19 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C39 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C52 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C21 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C14 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C61 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C4 Cat7    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 424 |
| C4 Cat6    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 422 |
| C2 Cat7    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 426 |
| C53 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C8 Cat6    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C43 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C62 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 428 |
| C20 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 428 |
| C35 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C14 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C15 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C36 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C30 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C13 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C15 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C54 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C9 Cat6    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C33 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C31 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 418 |
| C57 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 422 |
| C28 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 427 |
| C9 Cat7    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C45 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C17 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C37 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C2 Cat6    | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C47 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C11 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 426 |
| C64 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 423 |
| C50 Cat7   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |
| C55 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 422 |
| C33 Cat6   | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA  | 425 |

Table 18(continued)

|            |                  |                      |                          |     |
|------------|------------------|----------------------|--------------------------|-----|
| C34 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C10 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C32 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C57 Cat7   | -----            | TGCAA-GTTAT----      | TTGAAACATTAA-AATAAACAAA- | 369 |
| C6 Cat6    | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 429 |
| AY988600Bp | ATGTTT-CAAAT---- | TAAAATGCAA-GTTATA--  | TTTGAACATTAA-AATAAACAAA- | 475 |
| C22 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 427 |
| C46 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 427 |
| C27 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 417 |
| C29 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C19 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 419 |
| C16 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C5 Cat7    | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C66 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 479 |
| C48 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C31 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C17 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 415 |
| C61 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 417 |
| C43 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C44 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C60 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C27 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C8 Cat7    | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 425 |
| C24 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C39 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C23 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C16 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C54 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C58 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C53 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C11 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C49 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C41 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C18 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C29 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C48 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C59 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C42 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C26 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C10 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAT---- | TTGAAACATTAA-AATAAACAAA- | 423 |
| C23 Cat1   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| C42 Cat1   | GTGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| AF499132Bt | ATGTTT-CAAAT---- | TAAAATGCAA-GTCG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| AF499130Bm | ATGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| C36 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| C7 Cat6    | ATGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| C12 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 439 |
| C47 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTG----  | TTTGAACATTAA-AATAAACAAA- | 441 |
| C58 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 457 |
| C21 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 417 |
| C12 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 420 |
| C3 Cat7    | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 424 |
| C23 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 421 |
| C18 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 415 |
| C49 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 421 |
| C38 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 417 |
| C42 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTT----  | TTTGAACCTTTA-AATAAACAAA- | 417 |
| C62 Cat7   | AAGTTT-CCAAT---- | TTAAATGCAC-GTTA----  | TTTGAACCTTTA-AATAAACCAA- | 421 |
| C60 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 423 |
| C25 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 419 |
| C45 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 419 |
| C63 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTAC---- | TTTGAACATTAA-AATAAACAAA- | 422 |
| C26 Cat7   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 425 |
| C46 Cat6   | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 421 |
| C5 Cat6    | ATGTTT-CAAAT---- | TAAAATGCAA-GTTA----  | TTTGAACATTAA-AATAAACAAA- | 417 |

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[illegible]

Table 18(continued)

|            |      |                                                              |     |
|------------|------|--------------------------------------------------------------|-----|
| C30        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C40        | Cat2 | ATGTTT-CAAAT----TGAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 417 |
| C29        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C25        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C2         | Cat5 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C8         | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| AY988599Bm |      | ATGTTT-CAAAT----TAAAATGCAA-GCTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C4         | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C1         | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACACTAA-AATAAACAAA- | 421 |
| C12        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TCGAAACATTAA-AATAAACAAA- | 421 |
| C30        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C50        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C59        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C56        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C4         | Cat3 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C17        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C2         | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C59        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 423 |
| C20        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGACACATTAA-AATAAACAAA- | 415 |
| C53        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C55        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C38        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C3         | Cat3 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C33        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C19        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C11        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATGAACAAA- | 419 |
| C21        | Cat1 | ATGCTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C2         | Cat4 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C56        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 417 |
| C60        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C3         | Cat5 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 411 |
| C5         | Cat5 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 413 |
| C3         | Cat4 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 413 |
| C1         | Cat5 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 417 |
| C6         | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 417 |
| C57        | Cat1 | ATGTTT-CAAAT----TATAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 417 |
| C22        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C39        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 417 |
| C27        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 423 |
| C24        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C31        | Cat2 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 421 |
| C10        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 423 |
| C49        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 423 |
| C7         | Cat4 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 423 |
| C1         | Cat4 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 423 |
| C45        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 413 |
| C6         | Cat5 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 425 |
| C17        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C6         | Cat3 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 419 |
| C9         | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 415 |
| C15        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 415 |
| C4         | Cat4 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 415 |
| C4         | Cat5 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 415 |
| C8         | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 415 |
| C2         | Cat3 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 425 |
| C16        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 425 |
| C1         | Cat3 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 429 |
| C31        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 439 |
| C25        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 427 |
| C29        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTAT----TTGAAACATTAA-AATAAACAAA- | 427 |
| C46        | Cat2 | ATGTTT-CAAGT----TAAATTCAG-GTTAT----TTGACACGTTAT-TTTAAACCACA  | 432 |
| C44        | Cat1 | ATGTTT-CAATT----TCACATGCAA-GTCAT----TGGTGTCTGTAC-ACTCAACTAAT | 428 |
| C40        | Cat1 | ATGTTT-CAAAT----TAAAATGCAA-GTTGT----TTGAAGCATTAA-AATAATCAAC  | 419 |
| C51        | Cat2 | AGGTTT-CAAAT----TAAAAGGCAA-GTTAT----TGGAACATTAA-AATAAACAAA-  | 419 |
| C26        | Cat2 | AGGTTT-CAAAT----TAAAATGCAA-GTTAT----TGGAACATTAA-AATAAACAAA-  | 419 |

Table 18(continued)

|            |      |                                                                            |     |
|------------|------|----------------------------------------------------------------------------|-----|
| C14        | Cat1 | ATGTTT -CAAAT - - - -TAAAAATGCAA -GTTAT - - - -TTGACACTTTAA -AATACACAAA-   | 409 |
| C54        | Cat1 | GTGTCA -CAAAT - - - -TAATGTGCGT -GTTAT - - - -TTG - -ACACTTT -AATATACACA-  | 419 |
| C56        | Cat7 | GTGTCT -CAAAT - - - -TAATGTGCGT -GTTTT - - - -TTG - -ACATTTT -AATATACACA-  | 419 |
| C32        | Cat1 | GTGTC - - -AAAT - - - -TAAAAATGCAA -GTTTT - - - -TTGTGACACTTT -AATATACACA- | 421 |
| C32        | Cat2 | ATGTTA -CAAAT - - - -AAAAACCCAT -TTTTT - - - -TCGCCCTCTTTAA -AATACCCAAA-   | 428 |
| C48        | Cat2 | AAGTTT -CAAAT - - - -TAAAAGGCAGCGTTACT -TCTGAAGCATCTATAAATATAACAGC         | 423 |
| C49        | Cat2 | AAGTTT -CAAAT - - - -TAAAATGCAA -GTTATT - -T - -GGAACATCAA -AATA -ATCAAC   | 419 |
| C27        | Cat2 | AGGTTT -CAAAT - - - -TAAAAGGCAA -GTTTT - - - -TGGAACCTTTA -AATTAACCAAT     | 425 |
| C15        | Cat2 | AATTTACAGAAT - - - -TAAAACCGCA -GTTTT - - - -TGGCCCCTTTT - -ACCCTCAAAG     | 433 |
| C55        | Cat2 | GTTGTTACATCT - - - -ATAATGTCCAGTGTTT - -GCTTCCCCTTTTG - -CTACACACCC        | 439 |
| AF217800Di |      | CTGCGA -TAAATAGTGCGAATTGCAGACGCATTGAGCACAAGATTTTGAATGCACATTG               | 532 |
|            |      |                                                                            |     |
| C28        | Cat1 | TAA -TTAGGGTAAAAAT -TTGCCATATTTTT - - -TGGATGGTAAATTCCAAAAGGTT -TA         | 473 |
| C28        | Cat2 | TAA -TTAGGGTAAAAAT -TTGCC -TATATAT - - -GGAGAGGAAAAATTCCAAAAGTT -TA        | 481 |
| C1         | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C19        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C39        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C52        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C21        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C14        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C61        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C4         | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 475 |
| C4         | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 473 |
| C2         | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCACTA -TGT -TT      | 477 |
| C53        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCACTA -TGT -TT      | 474 |
| C8         | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -CGT -TT      | 474 |
| C43        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATGTA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C62        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 479 |
| C20        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 479 |
| C35        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C14        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C15        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C36        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C30        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C13        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C15        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C54        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C9         | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C33        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C31        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 469 |
| C57        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 473 |
| C28        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 478 |
| C9         | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C45        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATACA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C17        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C37        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C2         | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C47        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C11        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 477 |
| C64        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 474 |
| C50        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C55        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 473 |
| C33        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C34        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C10        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C32        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C57        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 420 |
| C6         | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 480 |
| AY988600Bp |      | TAA -ATAGAGTAAAAAAATTAGCATATA -TAT -GTGAATG -ATAATTTCAATA -TGT -TT         | 529 |
| C22        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 478 |
| C46        | Cat7 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 478 |
| C27        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 468 |
| C29        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 476 |
| C19        | Cat6 | TAA -ATAAGGTAAAAAA -TTAGCATATA -T - - -GTGAATG -ATAATTTCAATA -TGT -TT      | 470 |

Table 18(continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C16 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C5 Cat7    | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C66 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 530 |
| C48 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C31 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C17 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 466 |
| C61 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C43 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C44 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C60 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C27 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C8 Cat7    | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C24 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C39 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C23 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C16 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C54 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C58 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C53 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C11 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C49 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C41 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C18 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C29 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C48 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C59 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C42 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C26 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C10 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C23 Cat1   | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGAATG-ACAATTTCAATA-TGT-TT  | 490 |
| C42 Cat1   | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGAATG-ACAATTTCAATA-TGT-TT  | 490 |
| AF499132Bt | CGA-GTAAAGGAAAAAATTAG-CATATA-T---GTGAATG-ACAATTTCAATA-TGT-TT  | 490 |
| AF499130Bm | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGAATG-ACAATTTCAATA-TGT-TT  | 490 |
| C36 Cat6   | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGGATG-ATAATTTCAATA-TGT-TT  | 490 |
| C7 Cat6    | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGGATG-ATAATTTCAATA-TGT-TT  | 490 |
| C12 Cat6   | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGGATG-ATAATTTCAATA-TGT-TT  | 490 |
| C47 Cat6   | CGA-ATAAAGGAAAAAATTAG-CATATA-T---GTGGATG-ATAATTTCAATA-TGT-TT  | 492 |
| C58 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTTCAATA-TGT-TT | 508 |
| C21 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C12 Cat7   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 471 |
| C3 Cat7    | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 475 |
| C23 Cat7   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C18 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGGATG-ATAATTTCAATA-TGT-TT  | 466 |
| C49 Cat7   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C38 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C42 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C62 Cat7   | TAA-ATAAGGGAAAAAATTTTCTATA-T---GTGAACG-ATAATTTCCATAATGT-TT    | 474 |
| C60 Cat7   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C25 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C45 Cat7   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C63 Cat6   | TAA-CTAACGTAAAAAATTAG-CATATA-T---GTGAATG-ATCATTTCAACA-TGT-TT  | 473 |
| C26 Cat7   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATTATTTCAATA-TGT-TT  | 476 |
| C46 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C5 Cat6    | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C22 Cat6   | TAA-ATAAGGTAAAAAATTAG-CATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C25 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C44 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C65 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C59 Cat6   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C1 Cat7    | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C6 Cat7    | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C7 Cat7    | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 475 |
| C55 Cat7   | TAA-ATAAGGTAAAAAA-TTAGCATATA-T---GTGAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C3 Cat2    | TAA-ATAAGGTAAAAA-ATTAGCATATA-TATA-TGAATG-ATAATTTCAATAT--T-TT  | 473 |
| C3 Cat1    | TAA-ATAAGGTAAAAA-ATTAGCATATA-TATA-TGAATG-ATAATTTCAATATG-T-TT  | 472 |

Table 18(continued)

|            |                                                               |     |
|------------|---------------------------------------------------------------|-----|
| C50 Cat6   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 474 |
| C35 Cat7   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 476 |
| C35 Cat1   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TATA-TGAATG-ATAATTTCAATATG-T-TT  | 474 |
| C57 Cat2   | CGA-GTAAAGGAAAAA-ATTAGCATATA-TG---TGAATG-ACAATTTCAATATG-T-TT  | 468 |
| C46 Cat1   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TATA-TGAATG-ATAATTTCAATATG-T-TT  | 478 |
| C40 Cat6   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 474 |
| C37 Cat7   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 471 |
| C30 Cat6   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 467 |
| C56 Cat6   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 474 |
| C3 Cat6    | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 470 |
| C24 Cat6   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TGT---GAATG-ATAATTTCAATATG-T-TT  | 468 |
| C26 Cat1   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TATA-TGAATG-ATAATTTCAATATG-T-TT  | 468 |
| C52 Cat1   | TAA-ATGCCGTAAAAATCACTATAATTTAATGCACTAAATGCATACCTTCGTTATGCT-TT | 489 |
| C41 Cat6   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 474 |
| C28 Cat7   | TAA-ATAAGGTAAAAA-ATTAGCATATA-TG---TGAATG-ATAATTTCAATATG-T-TT  | 480 |
| C37 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT--T   | 481 |
| C21 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT--T   | 477 |
| C19 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT--T   | 481 |
| C5 Cat1    | TAA-ATAAGGTAAAGAAA-TTAGCTTATATATAT--GAATG-ATAGTTTCAATA-TGT-AT | 478 |
| C6 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 479 |
| C7 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 477 |
| C10 Cat2   | TAA-A-AAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 490 |
| C1 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-G-TT   | 459 |
| C4 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAAGG-ATAATTTCAATA-T-G-TT   | 465 |
| C16 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-G-TT   | 477 |
| C50 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-G-TT   | 471 |
| C35 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 474 |
| C38 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 477 |
| C23 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 477 |
| C43 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 475 |
| C22 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 481 |
| C9 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 477 |
| C36 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 471 |
| C11 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 471 |
| C14 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T-T-TT   | 481 |
| C5 Cat4    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 478 |
| C43 Cat1   | TAT-TTAAGGTAAAAA-TTAACATAGATATAT--GAATG-ATAATTTCTATA-AGT-GA   | 476 |
| C6 Cat4    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 422 |
| C5 Cat3    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 534 |
| C7 Cat5    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 478 |
| C58 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG--TAATTTCAATA-TGT-TT   | 479 |
| C58 Cat1   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 480 |
| C52 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 476 |
| C18 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 474 |
| C41 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 472 |
| C20 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 492 |
| C5 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 476 |
| C45 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 478 |
| C12 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 478 |
| C13 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 474 |
| C42 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 474 |
| C33 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 474 |
| C34 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 480 |
| C2 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 480 |
| C30 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 470 |
| C40 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 468 |
| C29 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATATATGAATG-ATAATTTCAATA-T---TT   | 472 |
| C25 Cat2   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 470 |
| C2 Cat5    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 474 |
| C8 Cat2    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T---TT   | 470 |
| AY988599Bm | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 474 |
| C4 Cat1    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 474 |
| C1 Cat1    | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 474 |
| C12 Cat1   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 474 |
| C30 Cat1   | TAA-ATAAGGTAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT   | 474 |

Table 18(continued)

|     |      |                                                               |     |
|-----|------|---------------------------------------------------------------|-----|
| C50 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C59 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C56 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGTATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C4  | Cat3 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C17 | Cat2 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C2  | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C59 | Cat2 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C20 | Cat1 | TAA-ATAAGGTAAAAAA-TTCGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C53 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C55 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C38 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C3  | Cat3 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C33 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C19 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C11 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C21 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C2  | Cat4 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C56 | Cat2 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C60 | Cat2 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C3  | Cat5 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 464 |
| C5  | Cat5 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 466 |
| C3  | Cat4 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 466 |
| C1  | Cat5 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C6  | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C57 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C22 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C39 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 470 |
| C27 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C24 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 474 |
| C31 | Cat2 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-T--TT   | 472 |
| C10 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C49 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C7  | Cat4 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C1  | Cat4 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 476 |
| C45 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 466 |
| C6  | Cat5 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 478 |
| C17 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 472 |
| C6  | Cat3 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAACA-TGT-TT  | 472 |
| C9  | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C15 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C4  | Cat4 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C4  | Cat5 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C8  | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 468 |
| C2  | Cat3 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 478 |
| C16 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 478 |
| C1  | Cat3 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 482 |
| C31 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 492 |
| C25 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 480 |
| C29 | Cat1 | TAA-ATAAGGTAAAAAA-TTAGCATATATATAT--GAATG-ATAATTTCAATA-TGT-TT  | 480 |
| C46 | Cat2 | TAA-TTAACGTAAGGAA--TTGGCATATATTTG--CAATGATAA--TACAAA--GAT-TT  | 482 |
| C44 | Cat1 | CAA-TAAGGTAAGGAA--TTAGCATATATATA--AGAGGGAGAATTTCAATA-TGT-TT   | 480 |
| C40 | Cat1 | TAA-ATAAGGTAGAAAA-TTAGCATCTATATA--TGAAGG-ATAATTTCAATA-TGT-TG  | 472 |
| C51 | Cat2 | TAA-ATAGGGTAAAAAA-TTGGCATATATATGT--GAAGTG-ATAATTTCAATA-TGT-T- | 472 |
| C26 | Cat2 | TAA-ATAGGGTAAAAAA-TTGGCATATATATG--GAAGTG-ATAATTTCAATA-TGT-TG  | 472 |
| C14 | Cat1 | TAA-ATGGGGTAAAAAA-TTCGCATATATATA--TGAATG-ATAATTTCAATA-TGT-TA  | 462 |
| C54 | Cat1 | TAT-ATATGGGGTAAAT-TTTTCGCATATATATGAGAGTG-ATAATCTCAATA-TGT-TA  | 474 |
| C56 | Cat7 | TAT-ATATGGGGTAAAA-TTTTCGCATATG--TGAGAGAG-AAAATCTCAATG-TGT-TA  | 472 |
| C32 | Cat1 | TAA-ATATGGTGTAATA-TTAGCACATATA--TATGAGTG-ATAATTTCAATA-TGT-GT  | 474 |
| C32 | Cat2 | TAA-TTAGGGTAAAAAT-TCCCATATATATA--GGAAAG-ATATTTCCACATNTGTT-TT  | 482 |
| C48 | Cat2 | TAA-TTAGGGGCATAAA-TTAGCATATAAATA--TGAAGG-AGAATTTCCATGATTTT-TT | 477 |
| C49 | Cat2 | TAA-TTAAGGTAAAAAA-TTAGCATCTTTATA--TGAATG-ATAATTTCAAGAAGTT-TT  | 473 |
| C27 | Cat2 | TAA-TTAGGGTAAAAAA-TTGGCATATATATA--GGAAGGATAATTTCAATA--GG-TT   | 477 |
| C15 | Cat2 | GGT-ATGTGGGGAAAAA-TTCCCATATATATGGAAGTG-ATATTTTCAATG--T-TT     | 486 |
| C55 | Cat2 | CGA-ATAGAAAGAAAAGTAATAGGCATAATTTGTGGAATGAGCGCTTCCGCGATGTGTC   | 498 |

Table 18(continued)

| AF217800Di |      | CACCATCGGGTTGATTCCCGATGGTACGTCTGGTTGAGGG-TCAATATCGATCAGATTAT | 591 |
|------------|------|--------------------------------------------------------------|-----|
|            |      | *                                                            |     |
| C28        | Cat1 | AATCCATTT -                                                  | 482 |
| C28        | Cat2 | TTCATGGTT -                                                  | 490 |
| C1         | Cat6 | TATATCATTT                                                   | 485 |
| C19        | Cat7 | TATATCATTT                                                   | 485 |
| C39        | Cat6 | TATATCATTT                                                   | 485 |
| C52        | Cat7 | TATATCATTT                                                   | 485 |
| C21        | Cat7 | TATATCATTT                                                   | 485 |
| C14        | Cat7 | TATATCATTT                                                   | 485 |
| C61        | Cat7 | TATATCATTT                                                   | 485 |
| C4         | Cat7 | TATATCATTT                                                   | 485 |
| C4         | Cat6 | TATATCATTT                                                   | 483 |
| C2         | Cat7 | TATATCATTT                                                   | 487 |
| C53        | Cat6 | TATATCATTT                                                   | 484 |
| C8         | Cat6 | TATATCATTT                                                   | 484 |
| C43        | Cat6 | TATATCATTT                                                   | 486 |
| C62        | Cat6 | TATATCATTT                                                   | 489 |
| C20        | Cat7 | TATATCATTT                                                   | 489 |
| C35        | Cat6 | TATATCATTT                                                   | 484 |
| C14        | Cat6 | TATATCATTT                                                   | 484 |
| C15        | Cat7 | TATATCATTT                                                   | 484 |
| C36        | Cat7 | TATATCATTT                                                   | 484 |
| C30        | Cat7 | TATATCATTT                                                   | 484 |
| C13        | Cat6 | TATATCATTT                                                   | 484 |
| C15        | Cat6 | TATATCATTT                                                   | 484 |
| C54        | Cat6 | TATATCATTT                                                   | 484 |
| C9         | Cat6 | TATATCATTT                                                   | 484 |
| C33        | Cat7 | TATATCATTT                                                   | 484 |
| C31        | Cat6 | TATATCATTT                                                   | 479 |
| C57        | Cat6 | TATATCATTT                                                   | 483 |
| C28        | Cat6 | TATATCATTT                                                   | 488 |
| C9         | Cat7 | TATATCATTT                                                   | 486 |
| C45        | Cat6 | TATATCATTT                                                   | 486 |
| C17        | Cat7 | TATATCATTT                                                   | 486 |
| C37        | Cat6 | TATATCATTT                                                   | 486 |
| C2         | Cat6 | TATATCATTT                                                   | 486 |
| C47        | Cat7 | TATATCATTT                                                   | 486 |
| C11        | Cat6 | TATATCATTT                                                   | 487 |
| C64        | Cat6 | TATATCATTT                                                   | 484 |
| C50        | Cat7 | TATATCATTT                                                   | 486 |
| C55        | Cat6 | TATATCATTT                                                   | 483 |
| C33        | Cat6 | TATATCATTT                                                   | 486 |
| C34        | Cat7 | TATATCATTT                                                   | 486 |
| C10        | Cat6 | TATATCATTT                                                   | 486 |
| C32        | Cat7 | TATATCATTT                                                   | 486 |
| C57        | Cat7 | TATATCATTT                                                   | 430 |
| C6         | Cat6 | TATATCATTT                                                   | 490 |
| AY988600Bp |      | TATATCATTT                                                   | 539 |
| C22        | Cat7 | TATATCATTT                                                   | 488 |
| C46        | Cat7 | TATATCATTT                                                   | 488 |
| C27        | Cat6 | TATATCATTT                                                   | 478 |
| C29        | Cat6 | TATATCATTT                                                   | 486 |
| C19        | Cat6 | TATATCATTT                                                   | 480 |
| C16        | Cat7 | TATATCATTT                                                   | 484 |
| C5         | Cat7 | TATATCATTT                                                   | 486 |
| C66        | Cat6 | TATATCATTT                                                   | 540 |
| C48        | Cat6 | TATATCATTT                                                   | 486 |
| C31        | Cat7 | TATATCATTT                                                   | 484 |
| C17        | Cat6 | TATATCATTT                                                   | 476 |
| C61        | Cat6 | TATATCATTT                                                   | 478 |
| C43        | Cat7 | TATATCATTT                                                   | 484 |
| C44        | Cat6 | TATATCATTT                                                   | 486 |
| C60        | Cat6 | TATATCATTT                                                   | 486 |

Table 18(continued)

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|            |      |            |     |
|------------|------|------------|-----|
| C27        | Cat7 | TATATCATTT | 486 |
| C8         | Cat7 | TATATCATTT | 486 |
| C24        | Cat7 | TATATCATTT | 484 |
| C39        | Cat7 | TATATCATTT | 484 |
| C23        | Cat6 | TATATCATTT | 484 |
| C16        | Cat6 | TATATCATTT | 484 |
| C54        | Cat7 | TATATCATTT | 484 |
| C58        | Cat7 | TATATCATTT | 484 |
| C53        | Cat7 | TATATCATTT | 484 |
| C11        | Cat7 | TATATCATTT | 484 |
| C49        | Cat6 | TATATCATTT | 484 |
| C41        | Cat7 | TATATCATTT | 484 |
| C18        | Cat7 | TATATCATTT | 484 |
| C29        | Cat7 | TATATCATTT | 484 |
| C48        | Cat7 | TATATCATTT | 484 |
| C59        | Cat7 | TATATCATTT | 484 |
| C42        | Cat7 | TATATCATTT | 484 |
| C26        | Cat6 | TATATCATTT | 484 |
| C10        | Cat7 | TATATCATTT | 484 |
| C23        | Cat1 | TACATCATTT | 500 |
| C42        | Cat1 | TATATCATTT | 500 |
| AF499132Bt |      | TATATCATTT | 500 |
| AF499130Bm |      | TATATCATTT | 500 |
| C36        | Cat6 | TATATCATTT | 500 |
| C7         | Cat6 | TATATCATTT | 500 |
| C12        | Cat6 | TATATCATTT | 500 |
| C47        | Cat6 | TATATCATTT | 502 |
| C58        | Cat6 | TATATCATTT | 518 |
| C21        | Cat6 | TATATCATTT | 478 |
| C12        | Cat7 | TATATCATTT | 481 |
| C3         | Cat7 | TATATCATTT | 485 |
| C23        | Cat7 | TATATCATTT | 482 |
| C18        | Cat6 | TATATCATTT | 476 |
| C49        | Cat7 | TATATCATTT | 482 |
| C38        | Cat6 | TATATCATTT | 478 |
| C42        | Cat6 | TATATCATTT | 478 |
| C62        | Cat7 | TATATAACAT | 484 |
| C60        | Cat7 | TATATCATTT | 484 |
| C25        | Cat6 | TATATCATTT | 480 |
| C45        | Cat7 | TATATCATTT | 480 |
| C63        | Cat6 | TACATCATTT | 483 |
| C26        | Cat7 | TATATCATTT | 486 |
| C46        | Cat6 | TATATCATTT | 482 |
| C5         | Cat6 | TATATCATTT | 478 |
| C22        | Cat6 | TATATCATTT | 478 |
| C25        | Cat7 | TATATCATTT | 480 |
| C44        | Cat7 | TATATCATTT | 486 |
| C65        | Cat6 | TATATCATTT | 484 |
| C59        | Cat6 | TATATCATTT | 484 |
| C1         | Cat7 | TATATCATTT | 486 |
| C6         | Cat7 | TATATCATTT | 480 |
| C7         | Cat7 | TATATCATTT | 485 |
| C55        | Cat7 | TATATCATTT | 484 |
| C3         | Cat2 | TA-ATCATTT | 482 |
| C3         | Cat1 | TATATCATTT | 482 |
| C50        | Cat6 | TATATCATTT | 484 |
| C35        | Cat7 | TATATCATTT | 486 |
| C35        | Cat1 | TATATCATTT | 484 |
| C57        | Cat2 | TATATCATTT | 478 |
| C46        | Cat1 | TATATCATTT | 488 |
| C40        | Cat6 | TATATCATTT | 484 |
| C37        | Cat7 | TATATCATTT | 481 |
| C30        | Cat6 | TATATCATTT | 477 |
| C56        | Cat6 | TATATCATTT | 484 |
| C3         | Cat6 | TATATCATTT | 480 |

Table 18(continued)

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|            |      |            |     |
|------------|------|------------|-----|
| C24        | Cat6 | TATATCATTT | 478 |
| C26        | Cat1 | TATATCATTT | 478 |
| C52        | Cat1 | TATATTCCTA | 499 |
| C41        | Cat6 | TATATCATTT | 484 |
| C28        | Cat7 | TATATCATTT | 490 |
| C37        | Cat2 | NATATCATTT | 491 |
| C21        | Cat2 | NATATCATTT | 487 |
| C19        | Cat2 | NATATCATTT | 491 |
| C5         | Cat1 | GATATCAATT | 488 |
| C6         | Cat2 | TA-ATCATGT | 488 |
| C7         | Cat2 | TA-ATCATGT | 486 |
| C10        | Cat2 | TA-ATCATGG | 499 |
| C1         | Cat2 | TA-ATCATGT | 468 |
| C4         | Cat2 | TA-ATCATGT | 474 |
| C16        | Cat2 | TA-ATCATTT | 486 |
| C50        | Cat2 | TA-ATCATTT | 480 |
| C35        | Cat2 | TA-ATCATTT | 483 |
| C38        | Cat2 | TA-ATCATTT | 486 |
| C23        | Cat2 | TA-ATCATTT | 486 |
| C43        | Cat2 | TA-ATCATTT | 484 |
| C22        | Cat2 | TA-ATCATTT | 490 |
| C9         | Cat2 | TA-ATCATTT | 486 |
| C36        | Cat2 | TA-ATCATTT | 480 |
| C11        | Cat2 | TA-ATCATTT | 480 |
| C14        | Cat2 | TATATCATTT | 491 |
| C5         | Cat4 | TATATCATTT | 488 |
| C43        | Cat1 | TATATCCTTT | 486 |
| C6         | Cat4 | TATATCATTT | 432 |
| C5         | Cat3 | TATATCATTT | 544 |
| C7         | Cat5 | TATATCATTT | 488 |
| C58        | Cat2 | TATATCATTT | 489 |
| C58        | Cat1 | TATATCATTT | 490 |
| C52        | Cat2 | TATATCATGT | 486 |
| C18        | Cat2 | TATATCATGT | 484 |
| C41        | Cat2 | TATATCATGT | 482 |
| C20        | Cat2 | TATATCATTT | 502 |
| C5         | Cat2 | TATATCATTT | 486 |
| C45        | Cat2 | TATATCATTT | 488 |
| C12        | Cat2 | TATATCATTT | 488 |
| C13        | Cat2 | TATATCATTT | 484 |
| C42        | Cat2 | TATATCATTT | 484 |
| C33        | Cat2 | TATATCATTT | 484 |
| C34        | Cat2 | TATATCATTT | 490 |
| C2         | Cat2 | TATATCATTT | 490 |
| C30        | Cat2 | TATATCATTT | 480 |
| C40        | Cat2 | TATATCATTT | 478 |
| C29        | Cat2 | TATATCATTT | 482 |
| C25        | Cat2 | TATATCATTG | 480 |
| C2         | Cat5 | TATATCATTT | 484 |
| C8         | Cat2 | TATATCATTT | 480 |
| AY988599Bm |      | TATATCATTT | 484 |
| C4         | Cat1 | TATATCATTT | 484 |
| C1         | Cat1 | TATATCATTT | 484 |
| C12        | Cat1 | TATATCATTT | 484 |
| C30        | Cat1 | TATATCATTT | 484 |
| C50        | Cat1 | TATATCATTT | 484 |
| C59        | Cat1 | TATATCATTT | 484 |
| C56        | Cat1 | TATATCATTT | 484 |
| C4         | Cat3 | TATATCATTT | 484 |
| C17        | Cat2 | TATATCATTT | 482 |
| C2         | Cat1 | TATATCATTT | 482 |
| C59        | Cat2 | TATATCATTT | 486 |
| C20        | Cat1 | TATATCATTT | 478 |
| C53        | Cat1 | TATATCATTT | 482 |
| C55        | Cat1 | TATATCATTT | 482 |

Table 18(continued)

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|            |      |              |     |
|------------|------|--------------|-----|
| C38        | Cat1 | TATATCATTT   | 482 |
| C3         | Cat3 | TATATCATTT   | 482 |
| C33        | Cat1 | TATATCATTT   | 482 |
| C19        | Cat1 | TATATCATTT   | 482 |
| C11        | Cat1 | TATATCATTT   | 482 |
| C21        | Cat1 | TATATCATTT   | 482 |
| C2         | Cat4 | TATATCATTT   | 482 |
| C56        | Cat2 | TATATCATTT   | 480 |
| C60        | Cat2 | TATATCATTT   | 484 |
| C3         | Cat5 | TATATCATTT   | 474 |
| C5         | Cat5 | TATATCATTT   | 476 |
| C3         | Cat4 | TATATCATTT   | 476 |
| C1         | Cat5 | TATATCATTT   | 480 |
| C6         | Cat1 | TATATCATTT   | 480 |
| C57        | Cat1 | TATATCATTT   | 480 |
| C22        | Cat1 | TATATCATTT   | 484 |
| C39        | Cat1 | TATATCATTT   | 480 |
| C27        | Cat1 | TATATCATTT   | 486 |
| C24        | Cat1 | TATATCATTT   | 484 |
| C31        | Cat2 | TATATCATTT   | 482 |
| C10        | Cat1 | TATATCATTT   | 486 |
| C49        | Cat1 | TATATCATTT   | 486 |
| C7         | Cat4 | TATATCATTT   | 486 |
| C1         | Cat4 | TATATCATTT   | 486 |
| C45        | Cat1 | TATATCATTT   | 476 |
| C6         | Cat5 | TATATCATTT   | 488 |
| C17        | Cat1 | TATATCATTT   | 482 |
| C6         | Cat3 | TATATCATTT   | 482 |
| C9         | Cat1 | TATATCATTT   | 478 |
| C15        | Cat1 | TATATCATTT   | 478 |
| C4         | Cat4 | TATATCATTT   | 478 |
| C4         | Cat5 | TATATCATTT   | 478 |
| C8         | Cat1 | TATATCATTT   | 478 |
| C2         | Cat3 | TATATCATTT   | 488 |
| C16        | Cat1 | TATATCATTT   | 488 |
| C1         | Cat3 | TATATCATTT   | 492 |
| C31        | Cat1 | TATATCATTT   | 502 |
| C25        | Cat1 | TATATCATTT   | 490 |
| C29        | Cat1 | TATATCATTT   | 490 |
| C46        | Cat2 | CATATTTTTT   | 492 |
| C44        | Cat1 | TATATCATTT   | 490 |
| C40        | Cat1 | TATATCATCT   | 482 |
| C51        | Cat2 | TATATCATTT   | 482 |
| C26        | Cat2 | TATATCATTT   | 482 |
| C14        | Cat1 | TATCTCATTT   | 472 |
| C54        | Cat1 | TATATCATTT   | 484 |
| C56        | Cat7 | TATAACATTT   | 482 |
| C32        | Cat1 | TATATCACAT   | 484 |
| C32        | Cat2 | TATCTTTTT -  | 491 |
| C48        | Cat2 | TAACCTCTTT - | 486 |
| C49        | Cat2 | ATCATCTTT -  | 482 |
| C27        | Cat2 | TATATCATTT   | 487 |
| C15        | Cat2 | TATTCTTTTC   | 496 |
| C55        | Cat2 | TATATTCACC   | 508 |
| AF217800Di |      | CAAATAATAT   | 601 |

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## CURRICULUM VITAE

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