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An Evaluation of the Species Status of *Physaria intermedia* (Brassicaceae)

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AN EVALUATION OF THE SPECIES STATUS OF *PHYSARIA INTERMEDIA* (BRASSICACEAE)

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ABSTRACT

The taxonomy of the genus *Physaria* (Brassicaceae) has been continually under revision as many species groups have proved difficult to resolve. *Physaria intermedia* (S. Watson) O'Kane Al-Shehbaz, has been a species whose circumscription has more recently been questioned and in need of clarification. The uncertainty surrounding the species stemmed from a combination of its geographical distribution, inhabiting two disjunct locations, as well as some minor differences in morphology that warranted a closer look. The species had been described as occupying southern Utah, northern and eastern (in northern 2/3) Arizona and southwest New Mexico with the remaining specimens inhabiting an isolated location in north-central New Mexico. Several *P. intermedia* specimens were analyzed molecularly and then morphologically to determine if any revisions to the taxon were needed. Maximum likelihood phylogenetic trees were constructed using three different gene regions from the extracted DNA of the specimens: the nuclear ribosomal ITS region, a 900 base-pair intron in the chloroplast *rps*16 gene, and the 725 base-pair intergenic spacer between the chloroplast *trn*V and *ndh*C genes. The maximum likelihood trees provided strongly suggested an answer to what was going on in the *P. intermedia* species and gave two conclusions. The first conclusion from the molecular analysis determined that two previously named *P. intermedia* specimens had been mis-identified and actually belonged within two other *Physaria* species and were re-named to reflect the species they represented. The second conclusion found two separate and monophyletic groups within the remaining *P. intermedia* specimens, indicating the discovery of an unnamed *Physaria* species, and the species was ultimately split into two. The group of specimens inhabiting north-central New Mexico was determined to represent the actual *P. intermedia* species leaving those segregate specimens unnamed. The unnamed species of southern Utah, Arizona and southwest

New Mexico will be given the name *Physaria fallax* K.A. Arp & O'Kane.

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CHAPTER 1

INTRODUCTION

The species *Physaria intermedia* (S. Watson) O'Kane Al-Shehbaz (Brassicaceae), as currently circumscribed, occupies two disjunct locations in the United States, one in the north-central region of New Mexico and the other comprising southern Utah, northern and eastern (northern 2/3) Arizona and southwest New Mexico. There has been speculation on whether or not the plants found in the north-central region of New Mexico actually belong to the *P. intermedia* species due to the combination of their isolated location from the rest of the species, as well as morphological attributes that may indicate they are more similar to other species in the genus *Physaria* or a new species all their own (O'Kane, 2010, Holmgren 2005).

The purpose of this thesis was to construct an in-depth DNA analysis of *P. intermedia* to determine whether or not the circumscription of the species should remain as previously described or if enough differences were present to denote the plants of north-central New Mexico as a species separate from those described as *P. intermedia* in Utah, Arizona, and southwest New Mexico.

The primary expectation of this research is that the plant species *Physaria intermedia* is currently incorrectly described and should be split into two separate species. The null hypothesis is that the plant species *Physaria intermedia* is correctly described and does not need to be split into two separate species.

The research done to test the null hypothesis consisted of constructing phylogenetic trees, which show evolutionary relatedness among species, from the information obtained from DNA sequences of each of the selected *P. intermedia*

specimens used in the study. Three different regions of DNA were sequenced from each of the specimens used in the study and compared against one another as well as an out-group of three other *Physaria* species which were used as a basis of comparison. The phylogenetic trees were important in this study because they ultimately showed the levels of evolutionary relatedness among the *P. intermedia* specimens sampled and whether or not they all belonged to a single species or if any revisions needed to be made. To confirm any separation of the species, the specimens to be split from one another needed occupy two, separate monophyletic groups on the constructed phylogenetic trees.

The term monophyletic refers to a group which contains all the descendants of a common ancestor. In order for *P. intermedia* to be split into two separate species, the specimens from each of the two areas must be identified as branching from separate common ancestors and still be contained within a monophyletic group that does not contain any members from the other region. The individual monophyletic groups will then need to fit into a larger monophyletic group, showing they all stemmed from a general common ancestor, to further indicate the relatedness of these two groups and show they belong in the same genus.

This thesis is intended to help clarify some of the questions surrounding the species *P. intermedia* as well as the genus *Physaria* as a whole. Its aim is to confidently state the status of *P. intermedia*, either by confirming the species circumscription as currently described or by falsifying the null hypothesis. If the null hypothesis is falsified, the species will need to be split and a new species ultimately be described, as well as re-describe *P. intermedia* to reflect the changes made.

The information from this thesis will be valuable to those researching the genus

Physaria as well as those working with the general flora of the region. It will help to clarify the current status of the genus as well as fill in some of the gaps of the evolutionary history to give insight as to where this family of plants came from and how they have come to inhabit their current locations in the southwestern United States.

CHAPTER 2

Historical Treatments of *P. Intermedia*

The taxonomy of *Physaria* (Nuttall ex Torrey & A. Gray) A. Gray has often been under consideration and revisions have been made several times over the past century (Payson, 1921 [1922]; Rollins and Shaw, 1973; Rollins, 1993; Al-Shehbaz & O'Kane, 2002). It was originally described by Torrey and Gray as a section of the Old World genus *Vesicaria* Tournefort *ex* Adason but was later, in 1848, denoted its own genus by Gray (Al-Shehbaz & O'Kane, 2002). As of 2002, *Physaria* consisted of only 22 species until the genus *Lesquerella* Watson (1888) was combined with it by Al-Shehbaz and O'Kane (2002) creating a larger genus of the 106 species. *Lesquerella* was originally classified as a North American genus distinguished from the Mediterranean *Vesicaria* due to its edentate filaments and veined septa.

There are many reasons to support the joining of these two genera by Al-Shehbaz & O'Kane (2002). *Physaria* and *Lesquerella* were originally separated due to differences in the morphology of their fruit inflations and sinuses, but are the same morphologically on all other levels (Rollins, 1993). The geographic ranges of these two genera also fall perfectly within each other. The genera are widespread throughout the western United States and northern Mexico and tend to occupy arid habitats normally supporting sparse vegetation (Al-Shehbaz & O'Kane, 2002). Molecular data provided by O'Kane using DNA sequences of the internal transcribed spacer (ITS) (Baldwin et al., 1995) also shows that *Physaria*, as traditionally circumscribed, is contained within *Lesquerella* and has evolved from *Lesquerella* more than once, thus the genus is polyphyletic, meaning it has descended from more than once ancestral group.

P. intermedia was originally included in the genus *Lesquerella* and was one of the many species of *Lesquerella* to make the move to *Physaria.* As with many other members of the genus, the identity of *P. intemedia* has also undergone consideration throughout the years. Originally, it was stated that *L. intermedia* and *L. arizonica* were not easily indistinguishable due to morphological similarities (Payson, 1922). Similar issues of the identity of *L. intermedia* were also addressed by Rollins and Shaw (1973) in *The Genus Lesquerella (Cruciferae) in North America* which stated that *L. intermedia* had more commonly been confused with *L. rectipes* due to their superficial resemblances. However, *L. intermedia* has been described as having a strongly multicipital and spreading caudex, with the lower cauline leaves densely tuffed at the base of each stem. This description of *L. intermedia* contrasts that of *L. rectipes,* which is described with caudex angles diverging at acute angles with a smaller underground portion and few cauline leaves which are not tuffed (Rollins & Shaw, 1973), clearing up the issue of mistaken identity between the two species.

Most recently, Noel H. Holmgren (2005) noted similarities between the lectotype and specimens of *P. intermedia* from north-central New Mexico and the species *P. parvula* (Greene) O'Kane & Al-Shehbaz from northern Colorado and northeastern Utah. Because of this, it was noted that plants of the intermountain floral region may represent an unnamed species. O'Kane (2010) pointed out that in addition to *P. intermedia*'s resemblance to *P. parvula*, the lectotype and individuals from north-central New Mexico are also quite similar to, but less robust than, *P. pulvinata* O'Kane & Reveal from southwestern Colorado. The similarities of the *P. intermedia* plants found in this New Mexico region to other species in the *Physaria* genus, *P. parvula* and *P. pulvinata*, could

indicate the species represents an unnamed taxon and needs to be studied further to clear up these in congruencies.

Biogeography of *P. intermedia*

All but six of the approximately 120 species of *Physaria* occupy the Northern portion of the Western Hemisphere (O'Kane & Al-Shehbaz, 2004), spanning the United States and extending into Mexico. The remaining five species are disjunctly located in Argentina and Bolivia in South America (O'Kane & Al-Shehbaz, 2004; Al-Shehbaz & Prina, 2009). The highest concentration of *Physaria* in the United States is located in the southwestern States and Rocky Mountain regions (Rollins, 1993), which includes the location of *P. intermedia.*

P. intermedia occupies three southwestern states in the United States: southwest and north-central New Mexico, Arizona, and southern Utah, with the lectotype coming from Santa Fe County, New Mexico (Figure 1 below). It is found in areas of dry sandy, gravelly, or rocky soil; claylike hillsides; open chiprock; dry stream bed; gravel bars; open knolls; open pinyon-juniper woods; open stands of sagebrush, Gambel oak or ponderosa pine communities; and calcareous substrates at elevations of 1600-2400m and flowering between April and August (O'Kane, 2010).

Figure 1: Lectotype of *P. intermedia*. Photo courtesy of the Smithsonian.

The main issue with the distribution of *P. intermedia* is that the area occupied in north-central New Mexico is disjunt from the widespread location of the rest of the specimens, with no individuals collected from the region between them (O'Kane personal communication). This leaves the question of how the same species could occupy these

two disjunt regions leaving no trace of migration behind and showing no evidence of one original population being subdivided with subsequent migration. The proposed explanation would be that those found in Arizona, Utah and southwest New Mexico are of a different, unnamed species than those in north-central New Mexico.

Molecular Phylogenetic Analysis

Molecular techniques have yet to be used to address the issue raised by N. H. Holmgren (2005) that *P. intermedia* may contain unrecognized taxa. The only technique used to assess the relationships among specimens in this species and those closely related has been through morphological analysis (Rollins & Shaw, 1973). Although O'Kane has used molecular techniques to study the genus *Physaria* and its relatedness to *Lesquerella*, it has not been directly used to test the current description of *P. intermedia* as a species.

There are many alternatives to using morphological data when evaluating the evolutionary relatedness of a group. A common method is to study non-plastid regions in DNA from the internal transcribed spacer (ITS) of nuclear ribosomal DNA (nrDNA) (Feliner & Rosselló, 2007). Included in the ITS region is the ITS1 spacer, the 5.8S nuclear ribosomal DNA, and the ITS2 spacer. The two spacers are transcribed and functional within the cell but not incorporated into the ribosome (Baldwin et al., 1995).

In addition to the ITS sequence, non-coding chloroplast DNA regions are of use in molecular analyses. One region of interest has been the *ndh*C/*trn*V intergenic spacer (Goodson et al., 2006). This region has been successfully used in Goodson et al. (2006) to help show the seven species of *Descurainia* Webb & Berthel (Brassicaceae) in the Canary Islands each belong in a monophyletic group.

Another chloroplast sequence that has proved effective for use in phylogenetic

analysis is the intron sequence of the ribosomal protein *rps*16 (Oxelman et al., 1996). Oxelman et al. (1996) used this sequence to study the phylogengy of the tribe *Sileneae* (Caryophyllaceae) and compared the results with those from the ITS sequence. The conclusions of this study were mostly congruent with the study using ITS and the conclusion was drawn that the *rps*16 intron sequences provided a valuable means of comparison in addition to the information the ITS sequences provided for resolving relationships in their study with the tribe *Sileneae*.

CHAPTER 3

MATERIALS AND METHODS

Specimen Acquisition and Sources of Tissue

The first step in executing this research project was to assemble the *P. intermedia* specimens to extract DNA from for to use in the molecular analysis. Tissue samples for this study were collected from two sources. 1) Tissue, as well as voucher specimens and previously extracted DNA, currently available from O'Kane. 2) Tissue removed from voucher specimens borrowed from the Grant Herbarium at the University of Northern Iowa, the Range Science Herbarium at New Mexico State University, the University of New Mexico Herbarium, the New Mexico State Department of Biology Herbarium, and the Brigham Young University Herbarium. Voucher information of all specimens collected for use in this study can be found in Appendix B.

Because of herbarium regulations limiting the number of specimens tissue can be taken from, the original field locations of the voucher specimens were mapped using the DMAP program (Morton, 2009) and those location coordinates were used to select a representative group of specimens, sampled throughout the entire range of known *P. intermedia* locations, to sample tissue from based on which were going to make the most contributions to the study. Locating enough voucher specimens from each of the two distinct geographical regions of *P. intermedia* to provide a complete analysis of the hypothesis was a key factor in the success of this study.

Table 1. Voucher information and localities for tissues used in the DNA analysis of this study. Revised taxonomy is given. Voucher information represented by collector(s), collector number and herbarium. Specimens are housed at the Grant Herbarium (ISTC) unless otherwise noted. Herbarium acronyms follow Index Herbarium (Appendix A).

Taxon	Voucher Information	Locality
P. cinerea	Atwood, Allen & Marino 3008 (BRY)	Coconino Co., Arizona
P. fallax	Allred 7202	Catron Co., New Mexico
P. fallax	Welsh, Taylor & Peabody 13164 (BRY)	Washington Co., Utah
P. fallax	Atwood 6149 (BRY)	Apache Co., Arizona
P. fallax	Holmgren 13566	Coconino Co., Arizona
P. fallax	Holmgren 13553	Garfield Co., Utah
P. fallax	O'Kane 4723	Garfield Co., Utah
P. fallax	Holmgren 13575	Kane Co., Utah
P. fallax	Holmgren 13252	Sevier Co., Utah
P. fallax	O'Kane 5504	Navajo Co., Arizona
P. fallax	O'Kane 9320	Catron Co., New Mexico
P. fallax	O'Kane 9350	Catron Co., New Mexico
P. fallax	O'Kane 9353	Apache Co., Arizona
P. fallax	O'Kane 9063	Catron Co., New Mexico
P. fallax	O'Kane 9382	Catron Co., New Mexico
P. fallax	Castetter 4694 (UNM)	Catron Co., New Mexico
P. fallax	Gerisch 3724 (UNM)	Catron Co., New Mexico
P. fallax	Sivinski & Lightfoot 1716 (UNM)	Catron Co., New Mexico
P. fallax	Gierisch 3683 (UNM)	Coconino Co., Arizona
P. fallax	Giersich 3686 (UNM)	Coconino Co., Arizona
P. fallax	O'Kane 9177	Socorro Co., New Mexico
P. fallax	O'Kane 9057	Coconino Co., Arizona
P. fallax	O'Kane 9059	Coconino Co., Arizona
P. fallax	Howell 1935 (UNM)	Navajo Co., Arizona
P. fallax	Hubbard 1978 (UNM)	Catron Co., New Mexico
P. intermedia	O'Kane 8628	Santa Fe Co., New Mexico
P. intermedia	Schiebout 4529 (UNM)	San Miguel Co., New Mexico
P. rectipes	Heil, Clifford & Schleser 23659	Apache Co., Arizona

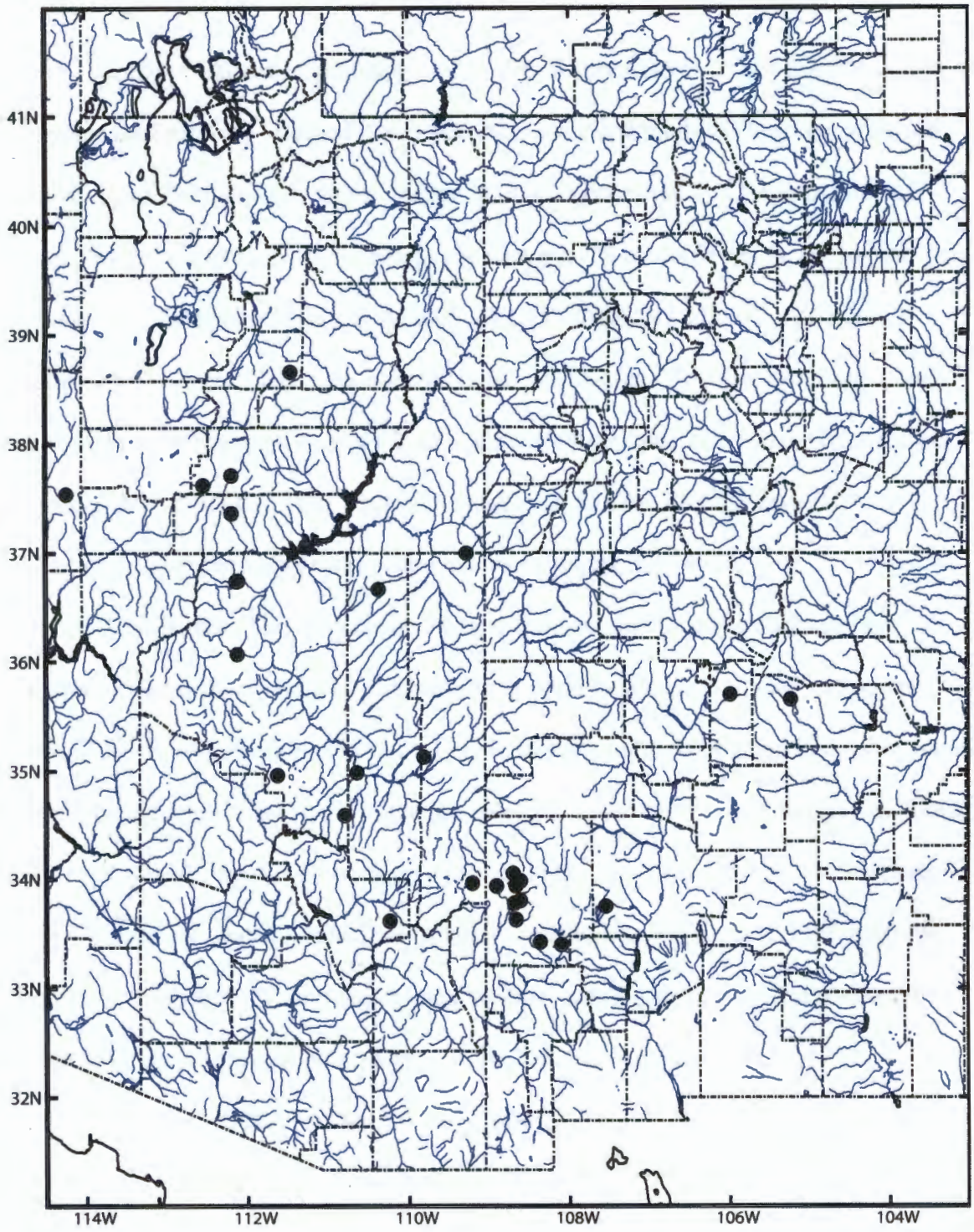

Figure 2. Distribution of *P. intermedia* specimens used in the DNA analysis portion of this study.

DNA Extraction

The DNA extraction protocol used in this project was the "Plant Extraction with Diatoms: the Fast Way" method developed by O'Kane and modified from the protocols Huang *et al.* (2000) and Carter and Milton (1993). Approximately 25-150 mg of leaf tissue was ground using a mortar and pestle with a pinch of sterile sea sand. One ml extraction buffer [100 mM tris; 1 M NaCl; 25 mM EDTA, pH 8.0; 175 mM sodium bisulfite; 1.5% (w/v) CTAB; pH adjusted to 6.5] containing 0.5% (v/v) mercaptoethanol was added to the ground tissue in a 2 ml microcentrifuge tube. This mixture was placed in a water bath at 65°C for one hour with occasional mixing. Enough Sevag (24:1 chloroform:isoamyl alcohol) was added to almost completely fill the 2 ml microcentrifuge tube. The contents of the tube were emulsified and centrifuged at maximal speed for five minutes. The aqueous (upper) phase was removed and reserved to a new 2 ml microcentrifuge tube and 1.1 ml adsorption buffer [6M guanidine thiocyanate; 100 mM Tris; 5 mM EDTA, pH 8.0; adjust pH to 6.5; 1.8% (w/v) de-fined diatomaceous earth] was added. These contents were incubated at room temperature for five minutes with frequent, yet gentle, mixing followed by centrifugation for 1 min at 800° rpm. The liquid was then carefully removed using a vacuum, making sure not to disturb the diatom pellet. With the diatom pellet remaining in the 2 ml microcentrifuge tube, 1-1.5 ml wash buffer (80 mM potassium acetate; 8.4 mM Tris-HCl, pH 7.4; 40 mM EDTA, ph 8.0; 55% EtOH) was be added and the diatom pellet resuspended followed by centrifugation at maximal speed for one minute. The liquid portion was then removed and the process repeated with 85% EtOH. The 2 ml microcentrifuge tubes containing the remaining diatom pellet were inverted and allowed to dry overnight. Once dry, 105 µl of TE (10

mM Tris-HCL, pH 8.4; 0.1 mM EDTA, pH 8.0) was added and the tube incubated at 65°C for 15 minutes followed by centrifugation at maximal speed for one minute. The liquid was reserved to a new 1.5 microcentrifuge tube labeled with the voucher information. The final step was then repeated using 55 µl of TE and the liquid layers combined. These samples were kept stored in a -20°C freezer when not in use.

Amplification of DNA Sequences

Three different regions of DNA were sequenced for each of the specimens used in the study. Two of these regions used consisted of chloroplast DNA. The two chloroplast regions were used for two reasons: they have sufficiently high mutation rates so that enough differences could potentially be present to compare the sequences against one another; and are also important because chloroplast DNA is inherited maternally and is therefore haploid and does not undergo recombination, allowing the sequences to remain relatively constant over time. The nuclear ribosomal internal transcribed spacer (ITS) was also sequenced, as it evolves quickly and can also indicate hybridization. It is important to use quickly evolving sequences when working with *P. intermedia* because it is a recent species. The genetic markers used were the nuclear ribosomal ITS region, a 900 base-pair intron in the chloroplast *rps*16 gene and the 725 base-pair intergenic spacer between the chloroplast *trn*V and *ndh*C genes.

The extracted regions of DNA were first amplified using the polymerase chain reaction (PCR) to obtain enough DNA to allow for sequencing. The DNA was amplified in 0.2 ml PCR microcentrifuge tubes in a Biometra thermocycler. The total volume for the PCR reaction was 25 µl, however the cocktail for each of the three regions is different.

PCR of the ITS sequence consisted of 1 µl extracted DNA, 2.5 µl 0.2 µl taq polymerase, 2.5 µl (10X) PCR buffer [100mM Tris-HCl, pH 8.3; 500 mM KCl, 17.5 mM MgCl; 5% (v/v) DMSO; 0.5% (v/v) Triton-X], 2.5 µl (8 uM) dNTP's, 2.5 µl (2µM) rITS-f primer (5' CGT AAC AAG GTT TCC GTA GG 3'), 2.5 µl (2 µM) rITS-r primer (5' ACT CGA TGG TTC ACG GGA TT 3'), and 13.8 µl H_2O. Primers were designed by O'Kane to match the known Brassicaceae sequences, the family in which *P. intermedia* resides.

Thermocycler lid temperature was set at 104°C. The DNA was first denatured to separate the strands of DNA for 2 minutes at 94 °C. Denaturation, annealing of the primers to the separated DNA strands, and extension to build the strands of DNA from the free dNTPs was carried out through 30 cycles of 94 °C for 45 seconds, 60 °C for 45 seconds and 72 °C for 1 minute. The final extension was at 72 °C for 5 minutes and followed by a 4 °C soak.

The PCR of the cocktail for the *rps*16 intron consisted of 2.5 µl previously extracted DNA, 0.25 µl taq polymerase, 2.5 µl TMAC, 9.75 µl H_2O, 2.5 µl (10x) PCR buffer [100mM Tris-HCl, pH 8.3; 500 mM KCl, 17.5 mM MgCl; 5% (v/v) DMSO; 0.5% (v/v) Triton-X], 2.5 µl (8uM) dNTP's, 2.5 µl (2 µM) rps-R2 primer (5' TCG GGA TCG AAC ATC AAT TGC AAC 3'), 2.5 µl (2 µM) rps-F primer (5' GTG GTA GAA AGC AAC GTG CGA CTT 3'), and 9.75 µl H_2O. Primers were used without modification as given by Oxelman et al. (1997).

Thermocycler lid temperature was set at 104 °C. DNA was initially denatured for 2 minutes at 95 °C. Denaturation, annealing and extension were carried out through 30 cycles of 95 °C for 35 seconds, 58 °C for 35 seconds, and 62 °C for 3 minutes and 30 seconds. The final extension was at 62 °C for 10 minutes followed by a 4 °C soak.

The PCR cocktail used in the amplification of the *trnV/ndhC* region consisted of 1.5 µl previously extracted DNA sample, 2.5 µl TMAC, 2.5 µl (10x) PCR buffer [100mM Tris-HCl, pH 8.3; 500 mM KCl, 17.5 mM MgCl; 5% (v/v) DMSO; 0.5% (v/v) Triton-X], 2.5 µl (8uM) dNTP's, 0.2 µl taq polymerase, 2.5 µl (2 µM) *trn*V-R primer (5' TTT ACC GAG CAG GTC TAC GG 3'), 2. µl (2 µM) *ndh*C-F primer (5' TGC CAA AAC AGG AAT AGC AC 3'), and 10.8 µl H_2O. Primers were used without modification as given by Goodson et al. (2006).

Therymocycler lid temperature was set at 104 °C. DNA was initially denatured at 95 °C for 2 minutes. Denaturation, annealing, and extension was carried out through 30 cycles of 94 °C for 35 seconds, 62 °C for 40 seconds, and 62 °C for 2 minutes and 30 seconds. The final extension period was at 62 °C for 5 minutes followed by a 4 °C soak.

DNA Sequencing

All three of the amplified sequences were checked for purity as well as for the presence of a strong band of DNA using gel electrophoresis in a 0.9% agarose minigel in SB buffer (10mM sodium hydroxide; pH adjusted to 8.5 with boric acid), containing ethidium bromide. This step was to ensure the DNA was extracted successfully and the PCR worked to amplify a good quantity of DNA for sequencing. PCR products were run in either 12 µl (2 µl PCR product, 2 µl loading dye, 8 µl H20) or 15 µl (3 µl PCR product, 3 µl loading dye, 9 µl H2O) amounts. Gels were placed on an illuminator and digital images taken with a Kodak EDAS 290 system.

The PCR products of the ITS, *rps*16, and *trn*V/*ndh*C sequences were treated to remove unconsumed dNTPs and primers that were not used up in the PCR reactions before sequencing. A 25 µl PCR reaction required 0.5 units exonuclease I and 0.25 units

of shrimp alkaline phosphatase. The mixture was incubated at 37 °C for 15 minutes, 80 °C for 15 minutes, and followed with a 4 °C soak. The temperature incubation was done using a Biometra thermocycler.

Sequencing was done as BigDye Terminator Reactions by the DNA Facility at the Iowa State University Office of Biotechnology, Ames, Iowa. Amplification primers [rITS-F and rITS-R; rpsF and rpsR2; trnV-R and ndhC-F] were sent in 5 μM concentrations. Forward and reverse strands were sequenced for proofing and the data was received as a chromatogram.

Phylogenetic Analysis

Twenty-eight specimens of *P. intermedia* were included in the phylogenetic analysis as well as sequences from three other *Physaria* species to serve as an out-group for comparison. Before the DNA sequences could be aligned, they were evaluated in the Chromas program to identify and correct any polymorphic sites, where the forward and reverse strands had different bases at the same site, or errors in base-labeling that occurred during sequencing. This was done by comparing the chromatogram with the sequence provided in both the forward and reverse directions until they could be aligned with each other without discrepancy. The ITS and *trnV/ndhC* sequences were aligned using Clustal-X 1.83 and the *rps16* sequence was aligned using Guidance with the MSUCLE option.

MEGA (Tamura et al., 2011) was used to calculate the following five separate maximum likelihood trees: an individual tree for each of the three gene regions sequenced, a tree composed from both chloroplast sequences (*trn*V/*ndh*C and *rps*16) and a tree combining all three sequences into one. Each of the five maximum likelihood trees

were constructed using their chosen model of evolution based off the Bayesian Information Criterion (BIC) measurement of suitability that was calculated using the Model Selection tool in the MEGA program. The model with the lowest BIC score was selected for use in each of the trees. The maximum likelihood tree constructed from the nuclear ribosomal ITS region was creating using the Hasegawa-Kishino-Yano model implemented with Gama Distribution (HKY+G), the tree derived from the *rps*16 chloroplast intron sequence was constructed following the Tamura 3-parameter model implemented with Gama Distribution (T92+G), and the sequences from the intergenic spacer between the chloroplast *trn*V and *ndh*C genes required the T92 model of evolutionary divergence for its tree. Combining the two chloroplast sequences resulted in the construction of a maximum likelihood tree following the T92+G model and the final incorporation of all three sequences, ITS, *rps*16 and *trn*V/*ndh*C, resulted in a tree constructed via the HKY+G model support values of. All five of the maximum likelihood trees were constructed using the non-parameter Bootstrap Method with 500 bootstraps replicates.

Morphological Analysis

A complete study of pant morphology was done to help distinguish the specimens in each species from one another. The results of this analysis were used to help describe the now two, distinct species. This description is ongoing and will be published separately.

CHAPTER 4

PHYLOGENETIC RESULTS

ITS Results

Following alignment of the ITS region, the sequence was 652 base pairs (bp) in length with the inclusion of gaps (Appendix C). The maximum likelihood tree had a log likelihood (LogL) of -1273.88.

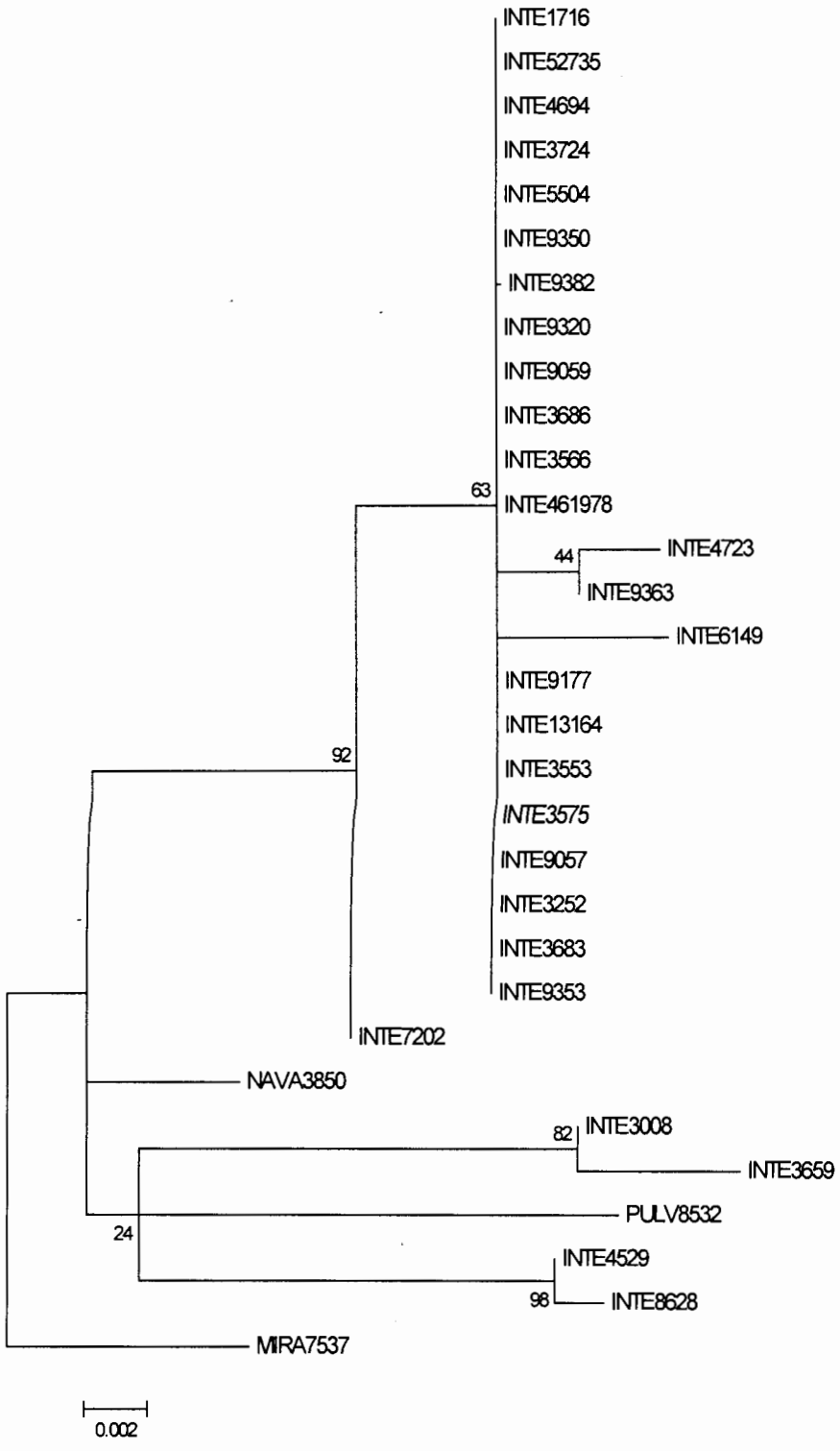

Figure 3. Maximum likelihood tree of *P. intermedia* and outgroup specimens from the ITS sequences. Distance scale of substitutions per site is at bottom of tree.

*rps*16 Results

The *rps*16 sequence was 900 bp once aligned with the inclusion of gaps (Appendix C). The log likelihood of this sequence was -1484.01 as computed from the maximum likelihood tree.

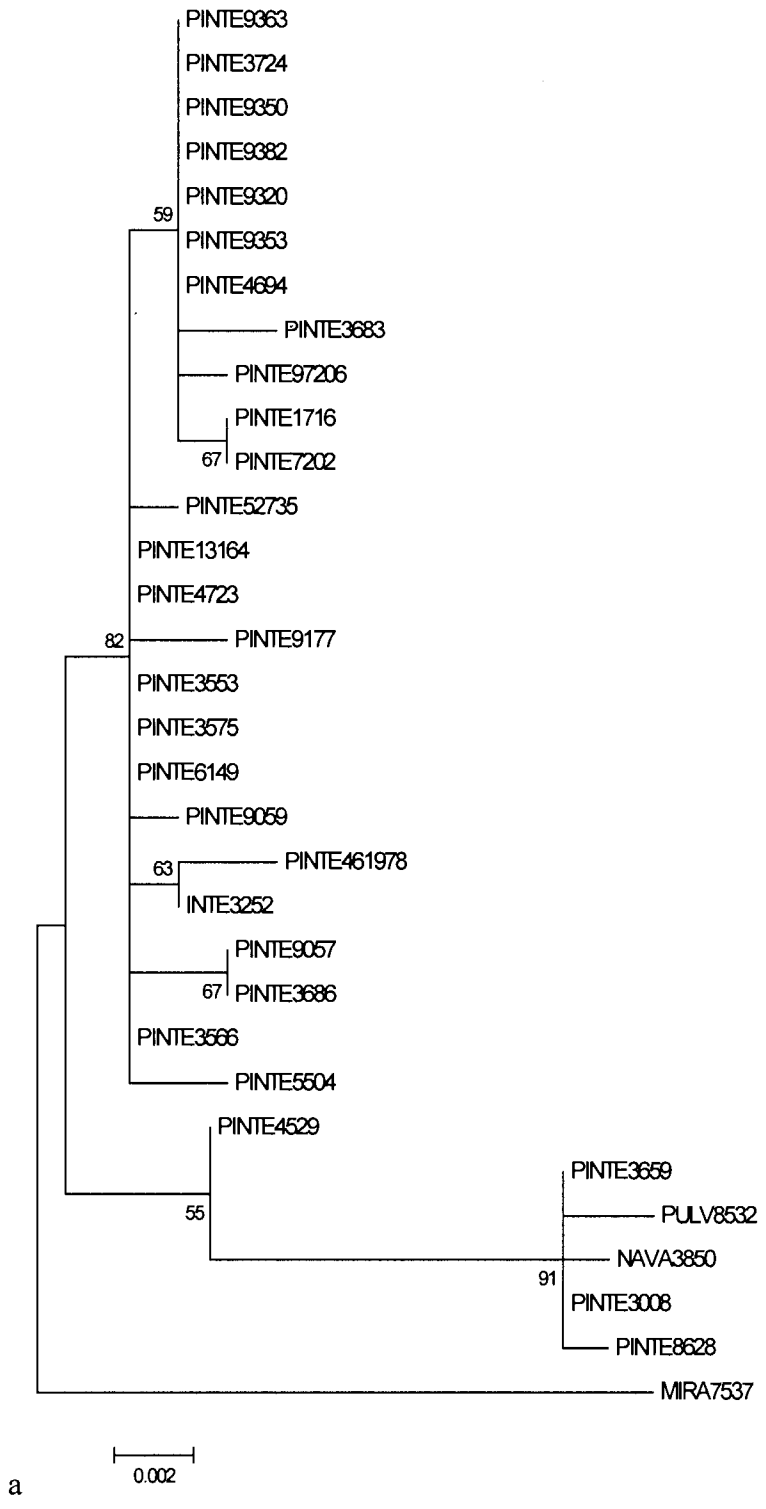

Figure 4. Maximum likelihood tree of *P. intermedia* and outgroup specimens constructed from the *rps*16 gene sequences. Distance scale of substitutions per site is at bottom of tree.

*trn*V/*ndh*C Results

The *trnV/ndhC* region was 647 bp following alignment with the inclusion of gaps (Appendix C). The log likelihood from the maximum likelihood tree was -1131.44.

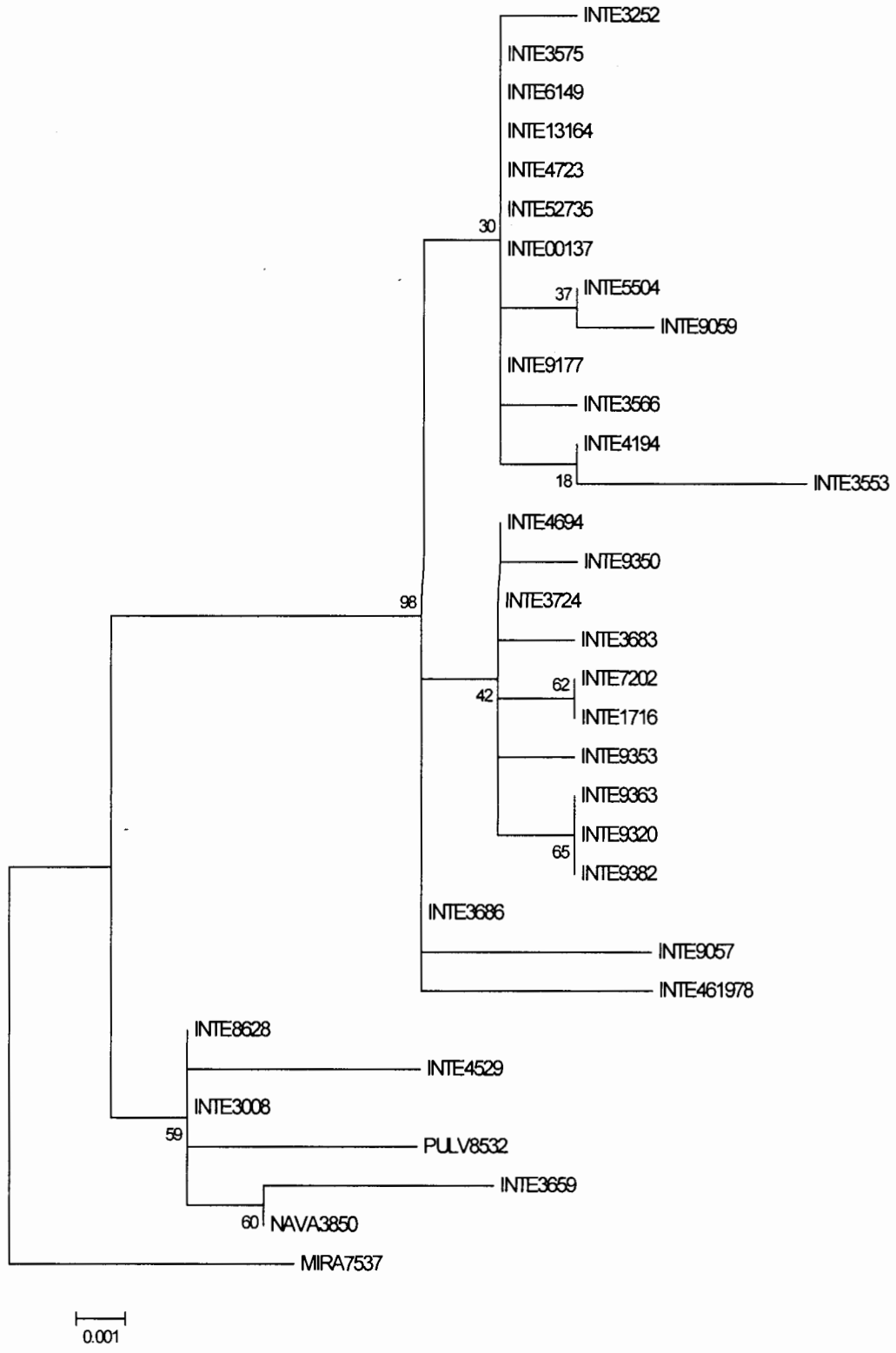

Figure 5. Maximum likelihood tree of *P. intermedia* from the *trn*V/*ndh*C gene region. Distance scale of substitutions per site is at bottom of tree.

Chloroplast Combined Results

Combining the two choloroplast regions of DNA, the sequence came to 1564 bp with the inclusion of gaps (Appendix C). The log likelihood of these two combine sequences from the maximum likelihood tree was -2608.82.

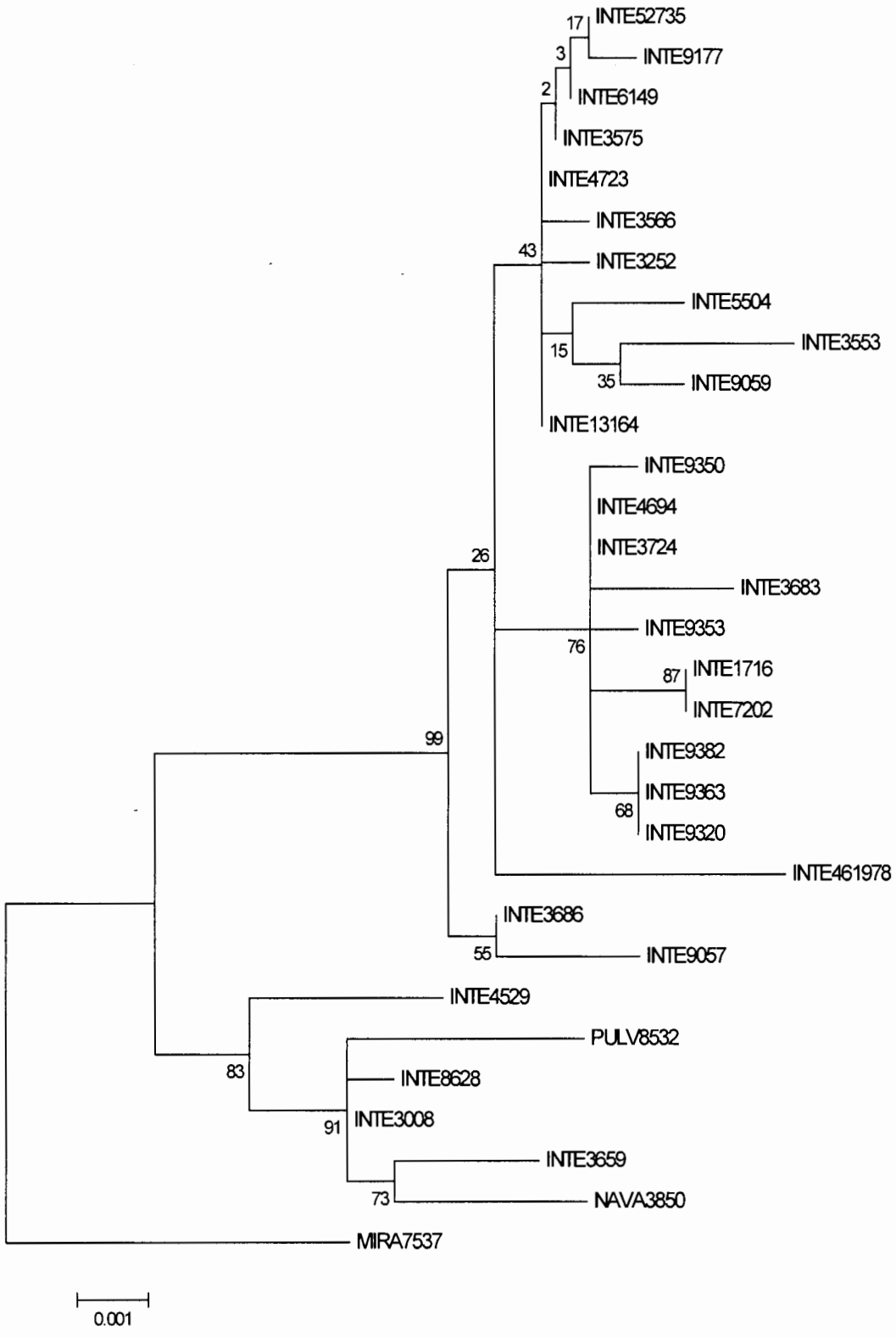

Figure 6. Maximum likelihood tree of *P. intermedia* and outgroup specimens from the combined chloroplast regions. Distance scale of substitutions per sire is at bottom of tree.

All Sequences Combined Results

All three sequences combined gave a final length of 2198 bp with the inclusion of gaps (Appendix C). The maximum likelihood tree of the combined sequences gave a log likelihood of -4052.89.

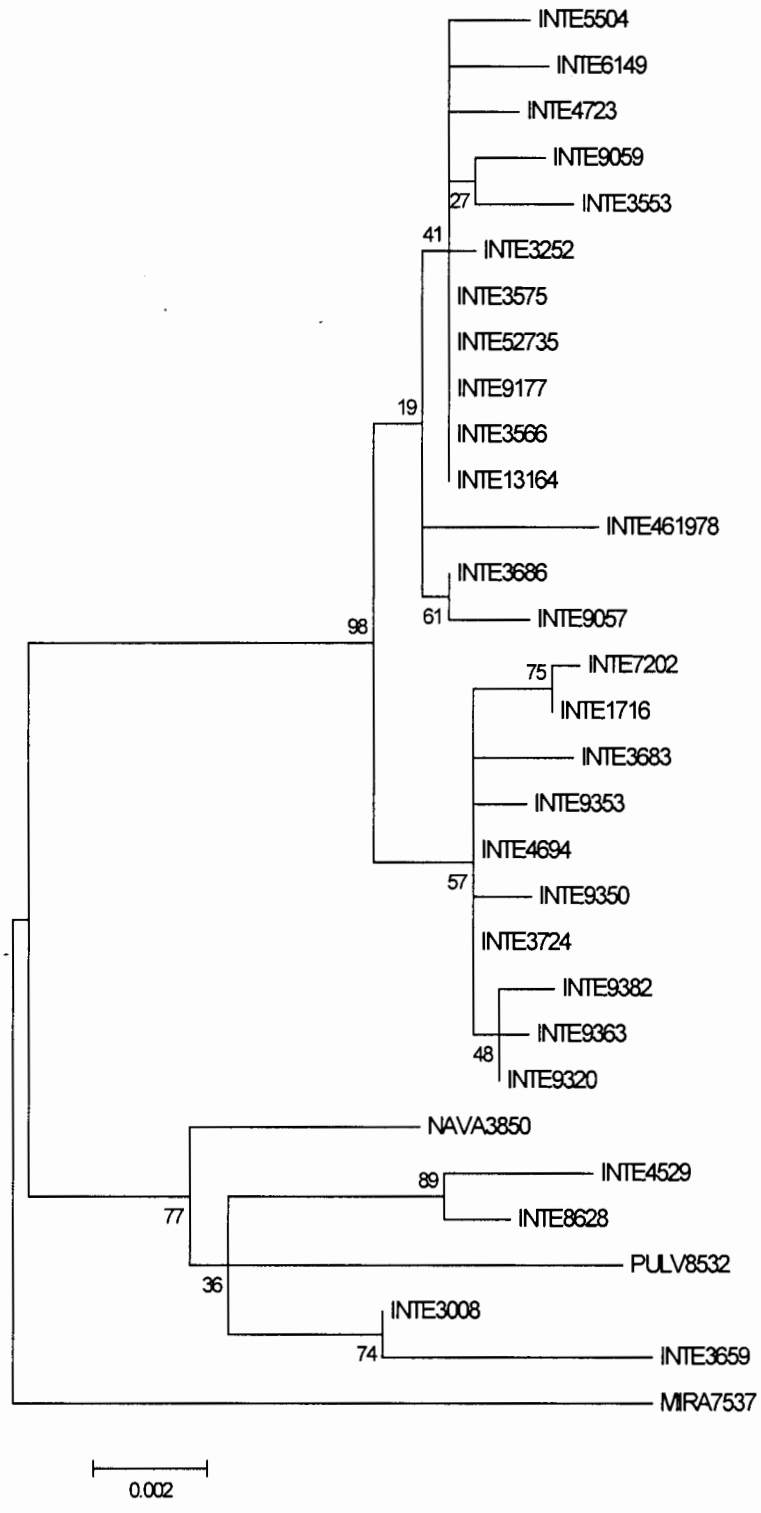

Figure 7. Maximum likelihood tree of *P. intemedia* and outgroup specimens from all three gene regions combined. Distance scale of substitutions per site is at bottle of tree.

CHAPTER 5

DISCUSSION

All five of the maximum likelihood trees constructed from the 28 *P. intermedia* DNA sequences sampled reflected the same results and provided insight into what was going on within the species. The first trend noticed in the phylogenetic results was a group of twenty-four specimens confined to a single monophyletic clade. There is no doubt that these 24 specimens are closely related to one another within the same species.

The information the DNA provided from the remaining four specimens sampled showed that they fell outside of this monophyletic group, indicating they belonged to different species, and had to be examined further to determine which species they belonged to. Two of these four specimens appeared to be related to one another within a common species while the other two were unique to two separate species.

Further evaluation of those four specimens was done to distinguish the species they each belonged to. A study of the morphological characteristics as well as geographical location of the two specimens that fell into separate and individual species quickly cleared up the issue with their misidentification. Specimen *Heil, Clifford and Schessler, 23659,* ISTC, and *Atwood, Allen and Marino, 3008*, BRY, had been previously incorrectly circumsbribed as *P. intermedia* whereas they actually belonged within two other *Physaria* species.

The circumscription of former *P. intermedia* specimen Heil, Clifford and Schessler, 23659, ISTC, was changed to *Physaria rectipes* (Wooton & Standley) O'Kane and Al-Shehbaz upon further examination. Similarly, the circumscription of former *P. intermedia* specimen Atwood, Allen and Marino, 3008, BRY, was changed to be

included within the species *Physaria cinerea* (S. Watson) O'Kane and Al-Shehbaz.

The two remaining specimens fell into their own clade which indicated monophyly within a single species. These were *P. intermedia* specimen *O'Kane, 8628,* ISTC, and *Schiebout, 4529,* UNM. Specimen *O'Kane, 8628*, ISTC, turned out to be a topotype of *P. intermedia*, meaning that it was taken from the type locality of *P. intermedia.* The type locality of a species is the location or source where the holotype, or type specimen, of that species was found. The holotype of a species is a single physical example or drawing of an organism known to have been used when the species was originally formally described. There currently exists no holotype specimen of *P. intermedia,* however, there is a lectotype which was chosen from among the *P. intermedia* syntypes to serve as the only name-bearing type specimen. This lectotype was the basis for determining *P. intermedia* specimen *O'Kane, 8628,* ISTC, as a topotype of *P. intermedia* by O'Kane. Therefore, the circumscription of *P. intermedia* specimen *O'Kane, 8628*, ISTC, and *P. intermedia* specimen *Schiebout, 4529*, UNM, was kept as originally determined and both specimens are continued to be representative of the species *Physaria intermedia.*

With specimens *O'Kane, 8628*, ISTC, and *Schiebout, 4529*, UNM, circumscribed as *P. intermedia* and the other two outlying specimens re-named to represent the species they best represent, the resulting 24 segregate specimens, all related in the same taxon, were determined to be an unnamed species.

Naming the New Species

The name chosen to represent the segregate species found in southern Utah, Arizona and southwestern New Mexico was *Physaria fallax* K.A. Arp & O'Kane, which will be independently pubished. Fallax is a Latin word meaning deceptive or deceitful and was chosen because of the nature of the plant. *P. fallax* has been deceiving researchers for such a long time by so closely resembling *P. intermedia* and hiding within that species.

Further analysis of the morphology of these now two distinct species was done to establish a means of identifying them from one another. Their morphology is remarkably similar, so much so that it has lead researchers to believe they belonged to the same species for many years, and finding a distinct characteristic of each to identify them by was difficult. Distinguishing features between the two species is that the caudux of *P. intermedia* is more robust than that of *P. fallax* and *P. intermedia* is often found with narrow hyaline margins on the lateral sepal. Another important factor that will continue to be used to distinguish these two species is their geographical location.

Description of *P. intermedia*

Physaria intermedia (S. Watson) O'Kane & Al-Shehbaz

Perennials; caudex massive, buried, branched, thickened with persistent leaf bases, each branch up to 9 mm thick, cespitose, plants forming clumps up to 2.5 dm across; densely pubescent, grayish-green, trichomes sessile or short stalked, spreading, several-rayed, rays furcate or bifurcate, slightly fused at base, tuberculate or finely tuberculate. **Stems** (1) 4– >50 per plant, erect to decumbent, unbranched, stout, densely

leafy sterile shoots sometimes present, 1.8–7.5 cm. **Basal leaves** clustered at stem base; blade linear to linear-spatulate, 7–70 × 1–2 mm, margins entire, usually involute, sometimes flattened, apex acute to rounded-acute. **Cauline leaves:** 2–7 per stem, blade linear-oblanceolate to linear, 8–28 × 1–1.5 mm, margins entire, involute, sometimes nearly flat distally. **Racemes** compact, strongly compact raceme to subumbellate. **Fruiting pedicels** ascending usually straight or slightly curved, 3–12 mm, stout. **Flowers:** sepals greenish yellow to pale green, ovate or oblong, 2.8–6 mm, lateral pair sometimes slightly cucullate and usually with a narrow hyaline margin, median pair tapering at both ends, thickened apically, slightly cucullate; petals spatulate or oblong, 5.3–11 mm, base sometimes widened, apex rounded or retuse. **Fruits** 4–12 per stem, sessile or substipitate, subglobose to slightly ovoid, 3–5 × 3–4 mm, apex acute, slightly flattened; valves sparsely pubescent, trichomes appressed; ovules 6–12 per ovary; style 2.5–4 mm. **Seeds** flattened, 1–1.6 × 1–1.2 mm.

Flowering May–Jul. Dry chip-rock, pebbly soil of open knolls and open pinyon-juniper woodlands on calcareous substrates; 1500–2100 m; northeast New Mexico.

Description of *P. fallax*

Physaria fallax K.A. Arp & O'Kane

Perennials; caudex buried, branched, thickened with persistent leaf bases, each branch up to 6 mm thick cespitose, plants forming clumps up to 8 cm across; densely pubescent, usually grayish-green, trichomes sessile or short stalked, spreading, several-rayed, rays furcate or bifurcate, slightly fused at base, tuberculate or finely tuberculate. **Stems** (1)6– >26, erect to decumbent, unbranched, stout, densely leafy sterile

shoots sometimes present, (0.5–)4–1.5(2.5) dm. **Basal leaves** clustered at stem base; blade linear to linear-oblanceolate, (3)5–62 × 1–3 mm, margins entire, usually involute, sometimes flattened, apex obtuse to subacute. **Cauline leaves:** blade linear-oblanceolate to linear, 1–3.5(–5) cm, margins entire, usually involute. **Racemes** compact, often nearly subumbellate. **Fruiting pedicels** often expanded distally, ascending or recurved, usually straight or slightly curved, rarely nearly sigmoid, (2.5)4–15 mm, stout. **Flowers:** sepals yellowish or greenish yellow, ovate or oblong, 3.2–6.3(–9) mm, lateral pair sometimes cucullate, median pair tapering at both ends, thickened apically, cucullate; petals spatulate or oblong, (5)6.5–10.5(15) mm, base sometimes widened, apex rounded or retuse. **Fruits** 2–30 per stem, sessile or substipitate, subglobose to slightly ovoid, 2–7 × 1.5–5 usually inflated, sometimes a little compressed or obcompressed, 4–6(–10) mm, apex acute, slightly flattened; valves sparsely pubescent, trichomes appressed; ovules (4–)12–16(–20) per ovary; style (1–)3–4.5(–7) mm. **Seeds** flattened, 1–1.9 × 0.6–2 mm. ***2n*** = 18, 20, 36.

Flowering Apr–Aug. Dry sandy, gravelly, or rocky soil, clayey hillsides, open limestone chip-rock, dry stream beds, gravel bars, open knolls, open pinyon-juniper woods, open stands of sagebrush, Gambel oak or ponderosa pine communities, calcareous substrates; 1600–2400 m; northern and eastern (in northern 2/3) Arizona, southwest New Mexico, southern Utah.

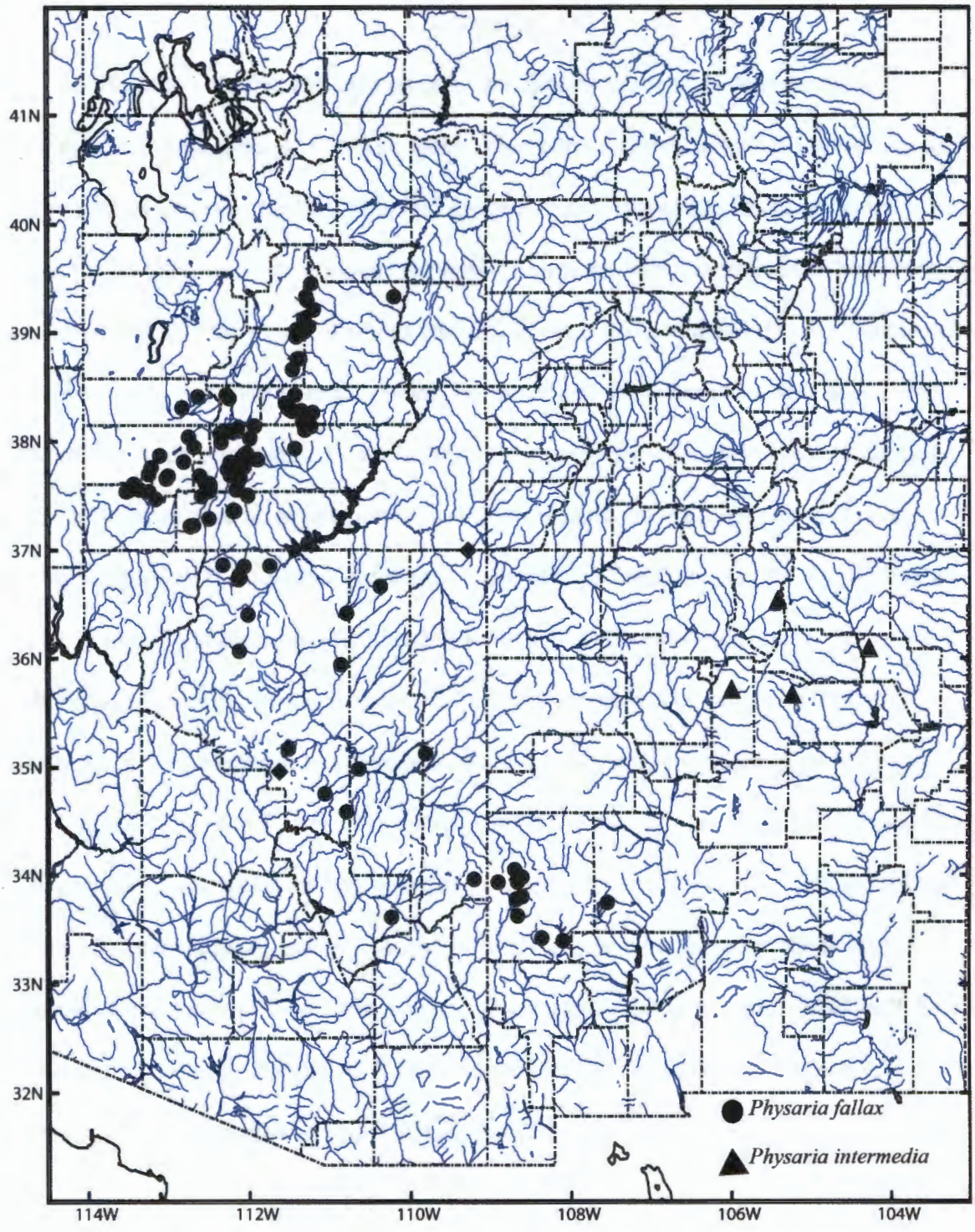

Figure 8. Distribution of *Physaria fallax and Physaria intermedia* of all respective specimens examined in this study.

Other Results

Not only did this research clear up the species status of *P. intermedia* and establish the new species, *P. fallax*, many other corrections to specimens belonging to the *Physaria* genus were made. Of the 206 alleged *P. intermedia* specimens collected from various herbaria and examined in this thesis project, 65 were determined to be incorrectly circumscribed upon arrival. The morphology of these 65 specimens was further examined to place them into their correct species. By the end of the experiment, four specimens were kept as determined as *P. intermedia*, 133 specimens were given the new species name *P. fallax*, five were renamed *P. arenosa* (Richardson) O'Kane and Al-Shehbaz, four renamed to *P. hitchockii* (Munz) O'Kane and Al-Shehbaz subp. *hitchockii*, two were placed into *P. subumbellata* (Rollins) O'Kane and Al-Shehbaz, one into *P. rectipes* × *P. montana* (A. Gray) Greene, two specimens were renamed to *P. calcicola* (Rollins) O'Kane and Al-Shehbaz, ten were placed into *P. arizonica* (S. Watson) O'Kane and Al-Shehbaz, one into *P. wardii* (S. Watson) O'Kane and Al-Shehbaz, one was named ca. *P. arizonica,* one specimen was noted as an usual form of *P. arizonica*, one was placed into *P. wardii* subp. *P. latifolia* (A. Nelson) O'Kane and Al-Shehbaz, one into ca. *P. arenosa*, one into ca. *P. rectipes*, one into *P. recticpes* with unusual infructescence length and fruit shape, two designated *P. ludoviciana* (Nuttall) O'Kane and Al-Shehbaz and one was renamed *P. navajoensis* (O'Kane) O'Kane and Al-Shehbaz.

Conclusion

The results of this research confirm the hypothesis that the former circumscription of *P. intermedia* had discrepancies and the specimens contained within the species needed to be split into two separate species. However, the split that needed to be made was not expected. It was originally thought that the specimens found in north-central New Mexico were of a species different than *P. intermedia,* which was comprised of the specimens found in southwest New Mexico, Arizona and southern Utah. However, the only specimens that were conclusively identified as *P. intermedia* were those in the north-central region of New Mexico and all others from Utah, Arizona and southwest New Mexico an unnamed species, results opposite of what was expected. The specimens from Arizona, Utah and southwest New Mexico have therefore historically been being placed into a species they did not actually belong to when they really were there own. This research will help to clarify and shape the identity of the species *P. fallax* and *P. intermedia* as well as help to further clear up discrepancies in the genus *Physaria* as a whole.

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APPENDIX A

SOURCES OF HERBARIUM SPECIMENS

Brigham Young University (BRY)

Grant Herbarium of the University of Northern Iowa (ISTC)

New Mexico State University Department of Biology Herbarium (NMC)

Range Science Herbarium at the New Mexico State University (NMCR)

University of New Mexico (UNM)

APPENDIX B

RESPECTIVE SPECIMENS EXAMINED

Physaria arenosa (Richardson) O'Kane and Al-Shehbaz

UNITED STATES, Utah, Catron County: 34:18.36N 107:59.42W *Lightfoot 91-132* (UNM).

Kane County: 37:26.58N 11:57.30W *Franklin 6424* (BRY). 37:18.16N 112:08.25W *Thorne and Welsh 10558* (BRY). 37:13.01N 112:52.26W *Neese, Welsh and Thorne, et al. 15729* (BRY).

Washington County: 37:17.01N 112:52.26W *Thorne, Clark and Tuhy 3596* (BRY).

ca. *Physaria arenosa* (Richardson) O'Kane and Al-Shehbaz

UNITED STATES, New Mexico, Los Alamos County: 35:52N 107:17W *Tierney and Fox 447* (UNM).

Physaria arizonica (S. Watson) O'Kane and Al-Shehbaz

UNITED STATES, Arizona, Coconino: 36:59.65N 111:56.62W *Atwood, Cann and Matheson 29249* (BRY). 36:44.16N 112:08.05W *Higgins 26490* (BRY).

Mohave County: 37:05.37N 112:23.13W *Welsh and Atwood 9808* (BRY)

UNITED STATES, Utah, Emery County: 39:03.14N 111:14.08 W *Tuhy 940* (BRY). 39:03.14N 111:14.08W *Harris 544* (BRY).

Garfield County: 37:44.45N 111:59.53W *Franklin 7204* (BRY).

Kane County: 37:27.08N 112:13.40W *Madsen 4093* (BRY).

Sanpete County: 37:32.10N 111:42.06W *Holmgren and Holmgren 8295* (BRY).

Wayne County: 38:19.08N 111:26.29W *Franklin and Tew 6553* (BRY).

ca. *Physaria arizonica* (S. Watson) O'Kane and Al-Shehbaz

UNITED STATES, Arizona, Coconino County: *Moran sn.* (BRY).

Physaria arizonica (Unusal Form) (S. Watson) O'Kane and Al-Shehbaz

UNITED STATES, Utah, Kane County: 37:30.26N 111:43.12W *Foster 4114* (BRY).

Physaria cinerea (S. Watson) O'Kane and Al-Shehbaz

UNITED STATES, Arizona, Coconino County: 35:57.04N 111:37.05W *Atwood, Allen and Marino 3008* (BRY).

Physaria calcicola (Rollins) O'Kane and Al-Shehbaz

UNITED STATES, Colorado, Fremont County: 38:22.16N 104:56.12W *Higgins 3287* (BRY).

Harding County: 36:04.44N 104:16.05W *Fletcher 5363* (UNM).

Physaria hitchockii (Munz) O'Kane and Al-Shehbaz subp. *Physaria hitchockii*

UNITED STATES, Utah, Emery County: 39:16.69N 111:10.95W *Lewis 4043A* (BRY). 39:07.34N 111:13.32W *Lewis 4030* (BRY).

Kane County: 37:29.70N 111:59.31W *Atwood 7203A* (BRY).

Physaria Fallax K.A. Arp and O'Kane

UNITED STATES, Arizona, Apache County: 35:07.07N 109:48.06W *Atwood 6149* (BRY). 36:59.56N 109:16.56W *Heil, Clifford and Schleser 23659* (ISTC). 33:57.53N 109:12.50W *O'Kane 9353* (ISTC).

Coconino County: 36:50.90N 112:03.30W *Fertig 23900* (BRY). 36:24.73N 110:47.05W *Atwood 6093* (BRY). 35:56.43N 110:51.58W *Atwood 6135* (BRY). 35:56.42N 110:51.50W *Atwood 6135* (BRY). 36:51.12N 111:44.23W *Franklin 7523* (BRY). 36:44.68N 112:06.85W *Holmgren, Holgren and Joseph 13566* (BRY). 36:23.93N

112:00.56W *Atwood 30111* (BRY). 36:44.41N 112:06.51N *O'Kane 3566* (ISTC). 36:43.56N 112:07.49W *Holmgren, Holmgren and Joseph 13567* (ISTC). 36:51.57N 112:19.04W *Windham 4194* (ISTC). 34:45.21N 111:03.50W *Windham 97-206* (ISTC). 36:03.92N 112:07.08W *O'Kane 9057* (ISTC). 36:44.03N 112:07.79W *O'Kane 9059* (ISTC). 35:10.12N 111:30.50W *Clark 12009* (UNM). 34:35.13N 110:47.45W *Gierisch and Wagner 3583* (UNM). 36:44.96N 112:07.18W *Gierisch 3694* (UNM). 34:35.13N 110L:47.45W *Gierisch 3683* (UNM).

Kaibab County: 36:45.08N 112:07.01W *Guerisch 3694* (UNM).

Navajo County: 36:39.59N 110:21.09W *O'Kane 5504* (ISTC). 33:36.09N 110:14.00W *Howell 81* (UNM). 34:58.84N 110:38.31W *Gierisch and Wagner 3686* (UNM).

UNITED STATES, New Mexico, Catron County: 33:56.29N 108:40.24W *Allred 7202* (NMCR). 33:23.95N 108:06.25W *O'Kane 9320* (ISTC). 33:48.09N 108:36.68W *O'Kane 9350* (ISTC). 33:37.06N 108:39.09W *Castetter 1932* (UNM). 33:58.82N 108:36.77W *Gierisch 3724* (UNM). 33:57.32N 108:40.16W *Wagner 3164* (UNM). 34:02.97N 108:42.12W *Sivinski and Lightfoot 1716* (UNM). 33:46.49N 108:41.12W *Hubbard 1978* (UNM). 33:57.32N 108:40.16W *Wagner 3165* (UNM). 33:25.27N 108;22.00W *O'Kane 9063* (ISTC). 33:55.97N 108:54.59W *O'Kane 9382* (ISTC).

Socorro County: 33:44.85N 107:32.90W *O'Kane 9177* (ISTC).

UNITED STATES, Utah, Beaver County: 38:18.10N 112:49.40W *Franklin 4797* (BRY). 38:24.19N 112:37.54W *Atwood 11106* (BRY).

Emery County: 39:19.47N 110:11.45W *Neese and Welsh 7641* (BRY). 38:08.00N 111:13.47W *Lewis 4666* (BRY). 39:27.01N 111:13.02W *Lewis 4745* (BRY). 39:12.04N 111:11.03W *Lewis 13* (BRY). 39:08.02N 111:16.23W *Welsh 15002* (BRY). 39:19.55N

111:16.92W *Grady 140* (ISTC).

Garfield County: 38:05.15N 112:14.17W *Madsen 4070* (BRY). 37:33.30M 112:09.26W *Madsen 2338* (BRY). 37:52.43N 112:03.04W *Madsen, Cox and Hansen 2268* (BRY). 37:42.14N 112:10.29W *Neese 17126* (BRY). 37:45.44N 112:13.40W *Mutz and Zarnekee 82-89* (BRY). 37:47.29N 112:13.40W *Mutz and Zarnekee 82-107* (BRY). 32:41.22N 112:13.40W *Madsen, Boylan, Cox and Hansen 2241* (BRY). 37:38.45N 52:13.14W *Madsen 604* (BRY). 37:48.21N 112:13.40W *Madsen 372* (BRY). 37:50.06N 112:05.11W *Madsen 426* (BRY). 37:43.59N 112:11.33W *Madsen 1196* (BRY). 38:06.84N 112:07.81W *Rollins and Rollins 83164* (BRY). 38:01.60N 111:58.95W *Reveal 4448* (BRY). 37:35.40N 1112:28.33W *Higgins and Higgins 15800* (BRY). 37:59.40N 112:20.35W *Rollins and Rollins 83156* (BRY). 37:39.37N 112"06.15W *Franklin 6389* (BRY). 37:44.52N 112:12.36W *Mutz and Zarnekee 87-72* (BRY). 37:47.39N 112:10.29W *Welsh and Clark 15611* (BRY). 37:44.52N 112:15.47W *Foster and Foster 4323A* (BRY). 37:49.61N 112:52.95W *Beck and Tanner 8215* (BRY). 37:50.06N 111:59.53W *Higgins, Welsh and Thorne 14729* (BRY). 37:45.48N 112:03.33W *Rollins and Rollins 83170* (BRY). 37:53.14N 112:01.23W *Atwood 8167* (BRY). 38:03.89N 112:21.13W *Rollins and Rollins 79164* (BRY). 37:40.82N 112:36.21W *Mutz and Zarnekee 82-324* (BRY). 37:55.84N 111:25.34W *Lewis 5729* (BRY). 37:48.22N 112:06.51W *Windham 00-137* (ISTC). 37:42.35N 1112:11.26W *Holmgren, Holmgren and Joseph 13553* (ISTC). 37:44.50N 112:09.15W *Holmgren and Holmgren 13786* (ISTC). 37:32.42N 112:29.15W *O'Kane 4194* (ISTC). 37:50.06N 112:05.11W *Madsen 426* (ISTC). 37:36.06N 112:29.16W IWindham 4718 (ISTC). 37:37.12N 112:32.16W *O'Kane 4723* (ISTC).

Iron County: 37:56.52N 112:40.23W *Madsen 4430* (BRY). 37:51.98N 113:06.07W *Holmgren and Holmgren 15223* (BRY). 37:40.62N 112:59.65W *Atwood 31390* (BRY). 37:33.43N 113:28.26W *Rollins and Rollins 81101* (BRY). 38:02.26N 112:44.53W *Mutz and Zarnekee 82-301* (BRY). 37:40.10N 113:00.18W *Neese 15684* (BRY). 37:48.58N 112:48.12W *Mutz and Zarnekee 82-285* (BRY). 37:33.05N 113:21.16W *Warrick 1180* (BRY). 37:39.17N 113:01.23W *Thorne 4487* (BRY). 37:45.30N 113:12.18W *Atwood 29505* (BRY). 37:41.59N 113:14.39W *Franklin 7650* (BRY).

Kane County: 37:21.95N 112;11.30W *Holmgren, Holmgren and Joseph 13575* (BRY). 37:13.51N 112:40.83W *Rollins and Rollins 8173* (BRY). 37:30.01N 112:00.57W *Franklin 8413* (BRY). 37:13.01N 112:43.45W *Welsh and Thorne 25137* (BRY). 37:21.44N 112:11.42W *Thorne and Welsh 10514* (BRY). 37:21.44N 112:10.36W *Atwood 20043* (BRY). 37:33.03N 112:29.38W *Welsh 20687* (BRY). 37:17.22N 112:29.38W *Thorne and Thorne 10822* (BRY). 37:21.57N 112:11.18W *Holmgren, Holmgren and Joseph 13575* (ISTC). 37:29.53N 112:35.10W *O'Kane 4718* (ISTC).

Piute County: 38:09.19N 111:55.39W *Welsh 14966* (BRY). 38:25.11N 112:16.41W *Greenwood 1979* (BRY). 38:23.26N 112:14.27W *Taye 2022* (BRY).

Sanpete County: 39:07.32N 111:18.31W *Clark and Taylor 2475* (BRY). 37:07.32N 111:18.31W *Lewis 7099* (BRY). 39:01.31N 111:24.16W *Lewis 7143* (BRY).

Sevier County: 38:39.20N 111:27.02W *Holmgren and Holmgren 13252* (BRY). 38:20.41N 113:14.39W *Harrison 7344* (BRY). 38:45.10N 112:49.04W *Cronquist 11561* (BRY). 38:45.10N 111:21.47W *Thorne 9423* (BRY). 39:00.21N 111:18.27W *Clark 2626* (BRY). 38:39.12N 111:27.01 *Holmgren and Holmgren 13252* (ISTC).

Washington County: 37:32.11N 113:14.39W *Welsh, Taylor and Peabody 13164* (BRY).

37:33.05N 113:28.58W *Warrick 1160* (BRY). 37:28.04N 113:09.12W *Thorne and Franklin 5503* (BRY). 37:36.39N 113:25.40W *Franklin 7050* (BRY). 37:32.11N 113:31.10W *Warrick 1660* (BRY). 37:32.11N 112:31.10W *Warrick 2996* (BRY).

Wayne County: 38:10.30N 111:19.53W *Madsen 4673* (BRY). 38:19.54N 111:37.25W *Madsen 3427* (BRY). 38:57.06N 111:24.03W *Cottam 4500* (BRY). 38:18.16N 111:30.53W *Welsh and Atwood 26273* (BRY). 38:17.24N 111:29.47W *Atwood 15543* (BRY). 38:06.19N 111:17.87W *Kass and Franklin 2691* (BRY). 38:16.32N 111:20.59W *Anderson 360* (BRY). 38:25.02N 111:25.23W *Porter 3864* (BRY). 38:11.17N 111:15.23W *Welsh 13357* (BRY). 38:20.15N 111:31.28W *Harrison 1337* (BRY). 38:15.40N 111:12.05W *Holmgren, Reveal and La France 2090* (BRY). 38:16.32N 111:27.35W *VanBuren and Aanderud 97-33* (BRY). 38:18.16N 111:29.47W *Welsh and Welsh 14351* (BRY). 38:20.55N 111:31.70W *Cottam 4500* (BRY).

Physaria intermedia (S. Watson) O'Kane and Al-Shehbaz

UNITED STATES, New Mexico, Harding County: 36:04.44N 106:16.05W *Spellenberg, Soreng and Ward 5995* (NMCR).

San Miguel County: 35:39.07N 105:14.23W *Schiebout 4529* (UNM).

Santa Fe County: 35.41.73N 105:59.70W *O'Kane 8628* (ISTC).

Taos County: 36:31N 105:25W *Wooton sn.* (NMC).

Physaria ludoviciana (Nuttall) O'Kane and Al-Shehbaz

UNITED STATES, Arizona, Coconino County: 36:46.52N 111:54.05W *Higgins 26490* (BRY).

UNITED STATES, Utah, Garfield County: 37:55.22N 111:10.35W *Atwood 15604* (BRY).

Physaria navajoensis (O'Kane) O'Kane and Al-Shehbaz

UNITED STATES, Arizona, Navajo County: 35:51.25N 110:31.40W *Atwood and Welsh 25390* (BRY).

Physaria rectipes (Wooton and Standley) O'Kane and Al-Shehbaz

UNITED STATES, Arizona, Apache County: 36:59.56N 109:16.56W *Heil, Clifford and Schlesser 23659* (BRY).

Coconino County: 36:49.53N 111:58.28W *Atwood and Higgins 3773* (BRY). 35:36.77N 112:25.70W *Atwood 6166* (BRY). 36:30.46N 110:56.43W *Atwood 6116* (BRY).

Navajo County: 36:29.54N 111:04.01W *Clifford and Heil 01-383* (BRY).

UNITD STATES, New Mexico, Cibola County: 35:04.50N 107:46.35W *DeBruin 420* (UNM).

McKinley County: 37:18.41N 108:44.60W *Peabody, Martin and Faulkner 1065* (BRY). 35:39.37N 107:41.17W *Peabody, Martin and Faulkner 1212* (BRY). 35:30.37N 109:09.20W *Peabody, Martin and Faulkner 1215* (BRY). 35:38.51N 108:06.50W *Peabody, Martin and Faulkner 1167* (BRY). 35:25.42N 108:03.39W *Clifford 95-664* (BRY). 35:42.47N 108:43.65W *Atwood 25869* (BRY). 35:38.13N 107:52.60W *Marley 1609* (UNM). 35:37.59N 108:57.43W *Knight 1143* (UNM).

Rio Arriba County: 35:40.55N 107:19.37W *Peabody and Sears 1894* (BRY). *Cully 1919* (UNM).

Sandoval County: 36:09.17N 107:38.39W *Peabody and Sears 1966* (BRY). 35:17.10N 106:28.25W *Sivinski 4399* (BRY). 36:02.78N 107:09.80W *Tonne 2003* (UNM). 35:36.19N 107:15.37W *Sivinski 6070* (UNM).

San Juan County: 36:32.44N 107:40.12W *Peabody 1839* (BRY). 36:16.16N

107:43.38W *Sivinski and Tonne 4850* (UNM).

UNITED STATES, Utah, Carbon County: 38:05.46N 110:47.38W *Kass 3871* (BRY). 39:32.58N 110:38.14W *Thorne and Chandler 4548* (BRY). 39:49.34N 110:46.74W *Rollins and Rollins 83122* (BRY).

Catron County: 33:57.32N 108:40.16W *Wagner and Sabo 3160* (UNM).

Emery County: 38:56.46N 110:38.25W *Atwood 14800* (BRY). 38:48.38N 110:01.15W *Kass and Welsh 2386* (BRY). 39:13.42N 110:41.29W *Harris 544* (BRY).

Garfield County: 37:43.59N 112:12.36W *Welsh and Moore 13616* (BRY). 37:32.52N 111:42.22W *Atwood and Franklin 13759* (BRY).

Kane County: 37:32.10N 111:42.06W *Franklin 7153* (BRY).

Wayne County: 38:11.22N 111:22.05W *Franklin and Kass 6129* (BRY).

ca. *Physaria rectipes* (Wooton and Standley) O'Kane and Al-Shehbaz

UNITED STATES, New Mexico, Socorro County: 34:23N 106:36W *Maddux, Loftin and McGree 452* (UNM).

Physaria rectipes (S. Watson) O'Kane and Al-Shehbaz (Unusual infructescence length and fruit shape)

UNITED STATES, New Mexico, Cibola County: 34:85.51N 108:13.20W *Sivinski, Lowrey, Reed and McNeal 7624* (UNM).

Physaria rectipes (Wooton and Standley) × *Physaria montana* (A. Gray) Greene

UNITED STATES, Colorado, Mesa County: 38:36.67N 109:02.39W *Neese 13687* (BRY).

Physaria subumbellata (Rollins) O'Kane and Al-Shehbaz

UNITED STATES, Utah, Unitah County: 40:42.57N 109:17.54W *Neese, Nelson, et al. 14046* (BRY). 40:40.23N 109:12.10W *Kass and Preston 2670* (BRY).

Physaria wardii (S. Watson) O'Kane and Al-Shehbaz

UNITED STATES, Utah, Garfield County: 37:57.58N 111:35.43W *Franklin 6489* (BRY).

Physaria wardii (S. Watson) O'Kane and Al-Shehbaz subp. *Physaria latifolia* (A. Nelson) O'Kane and Al-Shehbaz

UNITED STATES, Utah, Garfield County: 37:57.88N 111:35.63W *Nixon 11193* (BRY).

APPEXDIX C

SEQUENCE ALIGNMENT

ITS Alignment

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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         10        20        30        40        50        60        70        80
INTE4529         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGCTG GTTTCCTAAC CGATCCCTTC
INTE9177         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE8628         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGCTG GTTTCATAAC CGATCCCTTC
INTE4723         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE13164        TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE3553         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE3575         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE9057         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE3683         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE9353         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE3252         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE461978       TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
PULV8532         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGCTG GTTTCCTAAC CGATCCCTTC
INTE6149         TCGATACCTT GACCAAACAG AACGACCCGT GAACATATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE3566         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
MIRA7537         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGCTG GTTTCCTAAC CTATCCCTTC
INTE3686         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE9059         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE9320         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE7202         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE9350         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGKTTG GTTTCCTAAC CGATTCCTTC
INTE9382         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGTTTG GTTTCCTAAC CGATTCCTTC
INTE3724         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGYTG GTTTCCTAAC CGATTCCTTC
INTE5504         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE4694         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE1716         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
NAVA3850         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGCGGGCTG GTTTCCTAAC CGATCCCTTC
INTE3008         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACYACTCT CGGYGGGGYTG GTTTCCTAAC CGATCCCTTC
INTE3659         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACTACTCT CGGCGGGCTG GTTTCCTAAC CGATCCCTTC
INTE52735        TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
INTE9363         TCGATACCTT GACCAAACAG AACGACCCGC GAACCTATTA TCACCACTCT CGGTGGGTTG GTTTCCTAAC CGATTCCTTC
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                 90         100        110        120        130        140        150        160
INTE4529         CCGCCGGATC CGTGGTTTCG TGTATCTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE9177         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE8628         CCGCCGGATC CGTGGTTTCG TGTATCTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE4723         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE13164        CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3553         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3575         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC KGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE9057         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC KGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3683         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE9353         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3252         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE461978       CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
PULV8532         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CTGGCGGTGA GTTTTCTCTC GGTCTGGGCA TGCACGTTGC TTCCGGATAA
INTE6149         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3566         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
MIRA7537         TCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGATGA GTTTTCTCTC GGTTGGGGCA TGCACGTTGC TTCCGGATAA
INTE3686         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE9059         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
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NAVA3850         CCGCCGGATC CGTGGTTTCG TGTATCTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3008         CCGCCGGATC CGTGGTTTCG TGYATTTGTC CCRRCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE3659         CCGCCGGATC CGTGGTTTCG TGCATTTGTC CCGACGGTGA GTTTTCTCTC GATCGGGGCA TGCACGTTGC TTCCGGATAA
INTE52735        CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
INTE9363         CCGCCGGATC CGTGGTTTCG TGTATTTGTC CCGGCGGTGA GTTTTCTCTC GGTCGGGGCA TGCACGTTGC TTCCGGATAA
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         170        180        190        200        210        220        230        240
INTE4529         ACACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGGCCGGAA ACGGTGCGTG
INTE9177         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE8628         ACACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGGCCGGAA ACGGTGCGTG
INTE4723         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE13164        AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3553         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3575         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9057         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3683         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9353         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3252         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE461978       AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
PULV8532         ACACAAAACC ACGGCACGAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTT
INTE6149         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATAAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3566         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
MIRA7537         ACACAAAACC ACGGCACGAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3686         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9059         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9320         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE7202         ACACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9350         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9382         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3724         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
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INTE4694         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE1716         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
NAVA3850         ACACAAAACC ACGGCACGAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE3008         ACACAAAACC ACGGCACGAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGYC TCGCCCGGAA ACGGTGCGTG
INTE3659         ACACAAAACC ACGGCACGAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGTC TCGCCCGGAA ACGGTGCGTG
INTE52735        AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
INTE9363         AAACAAAACC ACGGCACAAA AAGTGTCAAG GAACATGAAA CATAACGGCC TTCACTCGCC TCGCCCGGAA ACGGTGCGTG
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         250        260        270        280        290        300        310        320
INTE4529         GGCGTATGTT GAGCCGTGAT ATAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9177         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE8628         GGCGTATGTT GAGCCGTGAT ATAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE4723         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE13164        GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3553         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3575         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9057         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3683         GGCGTRTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9353         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3252         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE461978       GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
PULV8532         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAATGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE6149         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3566         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
MIRA7537         GGCGTATGTC GAGCCGCGAT ATAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3686         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9059         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9320         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE7202         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9350         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9382         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3724         GGCGTRTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE5504         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE4694         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE1716         GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
NAVA3850         GGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3008         CGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE3659         CGCGTATGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE52735        GGCGTGTGTC GAGCCGCGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
INTE9363         GGCGTGTGTC GAGCCGYGAT CTAAAGTCTA AAACGACTCT CGGCAACGGA TATCTCGGCT CTCGCATCGA TGAAGAACGT
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                      330        340        350        360        370        380        390        400
INTE4529         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9177         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE8628         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE4723         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE13164        AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3553         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3575         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9057         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3683         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9353         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3252         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE461978       AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
PULV8532         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE6149         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3566         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
MIRA7537         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3686         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9059         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9320         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE7202         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9350         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9382         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3724         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE5504         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE4694         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE1716         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
NAVA3850         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3008         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE3659         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE52735        AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
INTE9363         AGCGAAATGC GATACTTGGT GTGAATTGCA GAATCCCGTG AACCATCGAG TCTTTGAACG CAAGTTGCGC CCGAAGCCTC
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         410        420        430        440        450        460        470        480
INTE4529         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCCTCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9177         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE8628         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCCTCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE4723         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE13164        TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3553         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3575         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9057         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3683         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9353         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3252         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE461978       TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
PULV8532         TAGGCCAAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCTTCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE6149         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3566         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
MIRA7537         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3686         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9059         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9320         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE7202         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9350         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9382         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3724         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE5504         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE4694         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE1716         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
NAVA3850         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3008         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCCTCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE3659         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCCTCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE52735        TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
INTE9363         TAGGCCGAGG GCACGTCTGC CTGGGTGTCA CAAATCGTCG TCCCCCATCA TCTTTCGGTG ATTCGGGACG GAAGCTGGTC
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         490        500        510        520        530        540        550        560
INTE4529         TCCCGTGCGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACATTG
INTE9177         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGYGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE8628         TCCCGTGCGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACATTG
INTE4723         TCCCGTGTGC TAACGCGAAT GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE13164        TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE3553         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE3575         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9057         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE3683         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9353         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE3252         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE461978       TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
PULV8532         TCCCGTGTGC TTACGCGAAC GGTTGGCCAA AATTCGAGCC AAGGATGCGG GAGCGTTCCG ACATACGGTG GTGAACATTG
INTE6149         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE3566         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
MIRA7537         TCCCGTGTGC TCACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACATTG
INTE3686         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9059         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9320         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE7202         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9350         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9382         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATAYGGTG GTGAACGTTG
INTE3724         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE5504         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE4694         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE1716         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
NAVA3850         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAAAATTG
INTE3008         TCCCGTGMGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACATTG
INTE3659         TCCCGTGAGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACATTG
INTE52735        TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
INTE9363         TCCCGTGTGC TAACGCGAAC GGTTGGCCAA AATCCGAGCC AAGGACGCGG GAGCGTTCCG ACATACGGTG GTGAACGTTG
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         570        580        590        600        610        620        630        640
INTE4529         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TCGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9177         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE8628         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TCGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE4723         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCAAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE13164        ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3553         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3575         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9057         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3683         ATCCACTCGC ATACCRTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9353         ATCCACTCGC ATACCRTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3252         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE461978       ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
PULV8532         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE6149         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3566         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
MIRA7537         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3686         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9059         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCRACCCC AGGTCAGGCG
INTE9320         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE7202         ATCCACTCGC ATACCRTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9350         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9382         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3724         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE5504         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE4694         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE1716         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
NAVA3850         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE3008         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGAWGCTC TYGATGACCC AAAGTCTTCT GAGCGACCCC AGGTCAGGCG
INTE3659         ATCCACTCGC ATACCATCGG TCGCTCCTCT CCCGATGCTC TCGATGACCC AAAGTCTTCT GAGCGACCCC AGGTCAGGCG
INTE52735        ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCGAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
INTE9363         ATCCACTCGC ATACCGTCGG TCGCTCCTCT CCCAAAGCTC TTGATGACCC AAAGTCTTCT AAGCGACCCC AGGTCAGGCG
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                        650
INTE4529        GGATCACCCG CT
INTE9177        GGATCACCCG CT
INTE8628        GGATCACCCG CT
INTE4723        GGATCACCCG CT
INTE13164       GGATCACCCG CT
INTE3553        GGATCACCCG CT
INTE3575        GGATCACCCG CT
INTE9057        GGATCACCCG CT
INTE3683        GGATCACCCG CT
INTE9353        GGATCACCCG CT
INTE3252        GGATCACCCG CT
INTE461978      GGATCACCCG CT
PULV8532        GGATCACCCG CT
INTE6149        GGATCACCCG CT
INTE3566        GGATCACCCG CT
MIRA7537        GGATCACCCG CT
INTE3686        GGATCACCCG CT
INTE9059        GGATCACCCG CT
INTE9320        GGATCACCCG CT
INTE7202        GGATCACCCG CT
INTE9350        GGATCACCCG CT
INTE9382        GGATCACCCG CT
INTE3724        GGATCACCCG CT
INTE5504        GGATCACCCG CT
INTE4694        GGATCACCCG CT
INTE1716        GGATCACCCG CT
NAVA3850        GGATCACCCG CT
INTE3008        GGATCACCCG CT
INTE3659        GGATCACCCG CT
INTE52735       GGATCACCCG CT
INTE9363        GGATCACCCG CT
Clustal Co      ********** **
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                         10        20        30        40        50        60        70        80
PINTE46197       TGATCTGCG- TGGATTTTTT CATCCGCCAC CTTTTATATA GGTGCTC-TT AGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE52735       TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9057        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE13164       TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9353        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9059        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCCA
PINTE3686        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE5504        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3683        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9320        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9382        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE97206       TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9350        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PULV8532         TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGTTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE4723        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9363        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3008        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3724        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE1716        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE9177        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE7202        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
MIRA7537         TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
INTE3252         TGATCTGCG- TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3553        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3575        TGATCTGCTG -GGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE8628        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE4694        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTCCTT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE4529        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3659        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE6149        TGATCTGCT- -GGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
PINTE3566        TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
NAVA3850         TGATCTGCTG TGGATTTTTT CATCCGCCAC TTTTTATATA GGTGCTC-TT GGCTCGACAT TTTTTGTTCT ATTTTATCTA
Clustal Co       ********    ********* **********  ********* ******* **  * ******* ********** ******** *
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                         90        100        110        120        130        140        150        160
PINTE46197       TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE52735       TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9057        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATCGAAA GTTTTTATTC
PINTE13164       TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9353        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9059        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3686        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATCGAAA GTTTTTATTC
PINTE5504        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3683        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9320        TTTTAC-AGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9382        TTTTAC-AGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE97206       TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9350        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PULV8532         TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE4723        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9363        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3008        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3724        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE1716        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE9177        TTTTACCAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE7202        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
MIRA7537         TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
INTE3252         TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3553        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3575        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE8628        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE4694        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE4529        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3659        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE6149        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
PINTE3566        TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
NAVA3850         TTTTACTAGA GTCCTACACT TTTTTGGAAT ATAAAAAAGA GCACAGGATG GAGCTCGAGG AGAATAGAAA GTTTTTATTC
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                         170        180        190        200        210        220        230        240
PINTE46197       CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE52735       CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9057        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE13164       CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9353        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9059        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE3686        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE5504        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE3683        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9320        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9382        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE97206       CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9350        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PULV8532         CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA ATCTTTTTAT ATTGAAAAAA
PINTE4723        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9363        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE3008        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA ATCTTTTTAT ATTGAAAAAA
PINTE3724        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE1716        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE9177        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE7202        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
MIRA7537         CTTTCGCAGG AGTAAGGATT TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
INTE3252         CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE3553        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE3575        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE8628        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA ATCTTTTTAT ATTGAAAAAA
PINTE4694        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE4529        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA ATCTTTTTAT ATTGAAAAAA
PINTE3659        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA ATCTTTTTAT ATTGAAAAAA
PINTE6149        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
PINTE3566        CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA GTCTTTTTAT ATTGAAAAAA
NAVA3850         CTTTCGCAGG AGTAAGGATC TAGGGTTAGT GCGAATCAAT AAGTTATTCC AACTTCGTAA ATCTTTTTAT ATTGAAAAAA
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                      250        260        270        280        290        300        310        320
PINTE46197       AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE52735       AAAAAA-CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9057        AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE13164       AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9353        AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9059        AA-----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3686        AAA----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE5504        AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3683        AAAA---TCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9320        AAA----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9382        AAA----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE97206       AAA----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9350        AAA----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PULV8532         AA-----CCT TTCAAGAAAT TTTACAATGG AAAAGTCAAT TTAATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE4723        AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9363        AAA----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3008        AA-----CCT TTCAAGAAAT TTTACAATGG AAAAGTCAAT TTAATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3724        AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE1716        AAAAAA-CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE9177        AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE7202        AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
MIRA7537         AAAAAAACCT TTCAAGCAAT TTTACAATGG AAAAGTAAAT TTAATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
INTE3252         AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3553        AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3575        AAAAA--CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE8628        AAA----CCT TTCAAGAAAT TTTACAATGG AAAAGTCAAT TTAATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE4694        AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE4529        AAAA---CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTCATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3659        AAA----CCT TTCAAGAAAT TTTACAATGG AAAAGTCAAT TTAATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE6149        AAAAAA-CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
PINTE3566        AA-----CCT TTCAAGCAAT TTTACAATGG AAAAGTCAAT TTTATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
NAVA3850         AAAAAA-CCT TTCAAGAAAT TTTACAATGG AAAAGTCAAT TTAATTTTCT TAAAATTGTA AAATTCTTTG AATCAAAAGT
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                         330        340        350        360        370        380        390        400
PINTE46197       CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE52735       CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9057        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE13164       CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9353        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9059        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3686        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE5504        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3683        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9320        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9382        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE97206       CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9350        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PULV8532         CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE4723        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9363        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3008        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAA- ----GGGCTT GTTGCTGCCC
PINTE3724        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE1716        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE9177        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE7202        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
MIRA7537         CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
INTE3252         CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3553        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3575        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE8628        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE4694        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE4529        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3659        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE6149        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
PINTE3566        CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
NAVA3850         CTATCATGTG TGAATCAAGC GTTTGTATGA TTCTTTGATG GAAAAAAATC ATAAATAAAA TAAGGGGCTT GTTGCTGCCC
Clustal Co       ********** ********** ********** ********** ********** *********      ****** **********
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                    ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                            410        420        430        440        450        460        470        480
PINTE46197          TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE52735          TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9057           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE13164          TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9353           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9059           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3686           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE5504           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3683           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9320           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9382           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE97206          TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9350           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PULV8532            TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE4723           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9363           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3008           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3724           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE1716           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE9177           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE7202           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
MIRA7537            TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTTAAAGTA AGGATAAAGA ATCCTGAAAC
INTE3252            TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3553           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3575           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE8628           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE4694           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE4529           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3659           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE6149           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
PINTE3566           TTTTTTAATA AAACGATTCA AGATCACCGA AGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
NAVA3850            TTTTTTAATA AAACGATTCA AGATCACCGA GGTAATGTCT AAACCCAAAG ATTCAAAGTA AGGATAAAGA ATCCTGAAAC
Clustal Co          ********** ********** **********  ********* ********** *** ****** ********** **********
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         490        500        510        520        530        540        550        560
PINTE46197       AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TYGAAAAAAA GAGACAAACA
PINTE52735       AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9057        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE13164       AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9353        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9059        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3686        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE5504        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3683        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TTGAAAAAAA GAGACAAACA
PINTE9320        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9382        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE97206       AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9350        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PULV8532         AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE4723        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9363        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3008        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3724        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE1716        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT TAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE9177        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE7202        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT TAAAATTGAT TCGAAAAAAA GAGACAAACA
MIRA7537         AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
INTE3252         AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3553        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3575        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE8628        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE4694        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE4529        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3659        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE6149        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
PINTE3566        AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
NAVA3850         AAGGAAATCC AGTTTTCAAT TGTTTGAACA ACTAGATCAG AATGAAGAAT CAAAATTGAT TCGAAAAAAA GAGACAAACA
Clustal Co       ********** ********** ********** ********** **********  ********* * ******** **********
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                     570        580        590        600        610        620        630        640
PINTE46197       AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE52735       AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9057        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE13164       AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9353        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9059        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3686        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE5504        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3683        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9320        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9382        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE97206       AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTATTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9350        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PULV8532         AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE4723        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9363        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3008        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3724        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE1716        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE9177        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE7202        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
MIRA7537         AAAAAGGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
INTE3252         AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3553        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3575        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE8628        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE4694        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE4529        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3659        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE6149        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
PINTE3566        AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
NAVA3850         AAAAAAGGGT TAGAGACTAC TCAATAAAAA AAGTACTTAA GGATTCTCTC TTGAGATATT TGAGAGTTAT TTAACTTGAG
Clustal Co       ***** **** ********** ********** ***** **** ********** ********** ********** **********
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                       650        660        670        680        690        700        710        720
PINTE46197       TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE52735       TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9057        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE13164       TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9353        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9059        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3686        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE5504        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3683        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9320        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9382        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE97206       TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9350        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PULV8532         TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG ATTTCAATAC AGACTAATTG ATTTAATGTT
PINTE4723        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9363        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3008        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3724        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE1716        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE9177        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE7202        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
MIRA7537         TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
INTE3252         TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3553        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3575        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE8628        TTACGAGAGT ACGAGTGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE4694        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE4529        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3659        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE6149        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
PINTE3566        TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
NAVA3850         TTACGAGAGT ACGAATGTTA CGAATGCTTT TTATGTAAAA AATATTTAGG GTTTCAATAC AGACTAATTG ATTTAATGTT
Clustal Co       ********** **** ***** ********** ********** **********  ********* ********** **********
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                 730        740        750        760        770        780        790        800
PINTE46197   TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE52735   TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9057    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE13164   TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9353    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9059    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3686    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE5504    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3683    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9320    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9382    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE97206   TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9350    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PULV8532     TTTATTAATC TATTTAATAT TTGAATTTTC TATTATATCG AGAGTTAACT TCTACTCAAT AT-----AGA GAGTTAACTT
PINTE4723    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9363    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3008    TTTATTAATC TATTTAATAT TTGAATTTTC TATTATATCG AGAGTTAACT TCTACTCAAT ATAATATAGA GAGTTAACTT
PINTE3724    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE1716    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE9177    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE7202    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
MIRA7537     TTTATTAATC TATTTAATAT TTGAATTTTA TATTATATAG AGCTTCTACT CAATATAGA- ---------- GAGTTAACTT
INTE3252     TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3553    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3575    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE8628    TTTATTAATC TATTTAATAT TTGAATTTTC TATTATATCG AGAGTTAACT TCTACTCAAT AT-----AGA GAGTTAACTT
PINTE4694    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE4529    TTTATTAATC TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3659    TTTATTAATC TATTTAATAT TTGAATTTT- TATTATATCG AGAGTTAACT TCTACTCA-- ---------- ----------
PINTE6149    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
PINTE3566    TTTATTAATA TATTTAATAT TTGAATTTTC TATTATATAG AG-------- ---------- ---------- -AGTTAACTT
NAVA3850     TTTATTAATC TATTTAATAT TTGAATTTTC TATTATATCG AGAGTTAACT TCTACTCA-- ---------- ----------
Clustal Co   *********  ********** *********  ******** * **
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                         810        820        830        840        850        860        870        880
PINTE46197       CTACTCATTG AATTTTTTT- -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE52735       CTACTCATTG AATTTTTTTT TCTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9057        CTACTCATTG AATTTTTTTT TCTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE13164       CTACTCATTG AATTTTTTTT C-TCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9353        CTACTCATTG AATTTTTTTT C-TCGAGCCG ATATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9059        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE3686        CTACTCATTG AATTTTTTTT TCTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE5504        CTACTCATTG AATTTTTTTT CCTCGAGCCG -TACGAGGCC AAAACCTCCT TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE3683        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9320        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9382        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE97206       CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9350        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PULV8532         CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGGG -TATTATTCA
PINTE4723        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TACGAGGCC AAAACCTCCT TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9363        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE3008        CTACTCATTG AATTTTTTTT TCTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGGG GTATTATTCA
PINTE3724        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE1716        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE9177        CTACTCATTG AATTTTTTTT TCTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE7202        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
MIRA7537         CTACTCATTG AATTTTTTTT TCTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
INTE3252         CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE3553        CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE3575        CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE8628        CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGGG -TATTATTCA
PINTE4694        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TATGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE4529        CTACTCATTG AATTTTTTTT C-TCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- --ATTATTCA
PINTE3659        -------TTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGGG GTATTATTCA
PINTE6149        CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
PINTE3566        CTACTCATTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
NAVA3850         -------TTG AATTTTTTTT -CTCGAGCCG -TACGAGGCC AAAACCTC-T TATACGTTTC TAGGGGGGG- -TATTATTCA
Clustal Co             *** *********    ********  ** ****** ******** * ********** *********    ********
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                 ....|....| ....|....|
                         890        900
PINTE46197       TATACATCTA TCCCAATGAG
PINTE52735       TATACATCTA TCCCAATGAG
PINTE9057        TATACATCTA TCCCAATGAG
PINTE13164       TATACATCTA TCCCAATGAG
PINTE9353        TATACATCTA TCCCAATGAG
PINTE9059        TATACATCTA TCCCAATGAG
PINTE3686        TATACATCTA TCCCAATGAG
PINTE5504        TATACATCTT GCCCAATGAG
PINTE3683        TATACATCTA TCCCAATGAG
PINTE9320        TATACATCTA TCCCAATGAG
PINTE9382        TATACATCTA TCCCAATGAG
PINTE97206       TATACATCTA TCCCAATGAG
PINTE9350        TATACATCTA TCCCAATGAG
PULV8532         TATACATCTA TCCCAATGAG
PINTE4723        TATACATCTA TCCCAATGAG
PINTE9363        TATACATCTA TCCCAATGAG
PINTE3008        TATACATCTA TCCCAATGAG
PINTE3724        TATACATCTA TCCCAATGAG
PINTE1716        TATACATCTA -CCCAATGAG
PINTE9177        TATACATCTA TCCCAATGAG
PINTE7202        TATACATCTA TCCCAATGAG
MIRA7537         TATACATCTA TCCCAATGAG
INTE3252         TATACATCTA TCCCAATGAG
PINTE3553        TATACATCTA TCCCAATGAG
PINTE3575        TATACATCTA TCCCAATGAG
PINTE8628        TATACATCTA TCCCAATGAG
PINTE4694        TATACATCTA TCCCAATGAG
PINTE4529        TATACATCTA TCCCAATGAG
PINTE3659        TATACATCTA TCCCAATGAG
PINTE6149        TATACATCTA TCCCAATGAG
PINTE3566        TATACATCTA TCCCAATGAG
NAVA3850         TATACATCTA TCCCAATGAG
Clustal Co       *********   *********
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                         10        20        30        40        50        60        70        80
INTE3683         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9353         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE1716         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE7202         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9363         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9320         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9382         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4694         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3724         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9350         GTCTACGGTT CGAATCCGTA TAGCCCNAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE52735        GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3252         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE6149         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4723         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3575         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE13164        GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9177         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3566         GTCTACGGTT CGAATCCGTA TAGCCCCAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3553         GTCTACGGTT CGAATCCGTA TAGCCCCAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGAGAA
INTE5504         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9059         GTCTACGGTT YGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9057         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCTAAAT AATTGGTTAA
INTE3686         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE461978       GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACCTTA AAATCAAAAT AATTGGATAA
INTE4529         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE8628         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3008         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3659         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATAAAAAT AATTGGATAA
NAVA3850         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
PULV8532         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAAATT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
MIRA7537         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
Clustal Co       **********  ********* ****** *** ******* ** ********** ****** *** ****  **** ******  **
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                          90        100        110        120        130        140        150        160
INTE3683         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9353         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE1716         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE7202         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9363         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE9320         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE9382         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE4694         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3724         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9350         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE52735        TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3252         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE6149         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4723         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3575         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE13164        TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9177         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3566         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3553         TTTTTTTACC TATTAW---- TGGATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE5504         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9059         TTTTTTTACT TATTAT---- TGGATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9057         TTTTTTTACT TATTAT---- TGGATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3686         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE461978       TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4529         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE8628         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3008         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3659         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
NAVA3850         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
PULV8532         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
MIRA7537         TTTTTTTACT TATTAT---- TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
Clustal Co       ********* *****      ** ******* ********* ********** ********** ********** ******** *
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                         170        180        190        200        210        220        230        240
INTE3683         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9353         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE1716         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE7202         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9363         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9320         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9382         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4694         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3724         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9350         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE52735        ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3252         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE6149         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4723         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3575         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE13164        ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9177         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3566         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3553         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE5504         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9059         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9057         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3686         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE461978       ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4529         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTTAATGGAG CCAATCACTA TCTATCGATA
INTE8628         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE3008         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE3659         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
NAVA3850         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
PULV8532         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
MIRA7537         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACGGAAAAC CTCTTTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
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                         250        260        270        280        290        300        310        320
INTE3683         TATCTAGATA GATACTTAAC TTAATAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9353         TATCTAGATA AATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE1716         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE7202         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9363         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9320         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9382         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE4694         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3724         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9350         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE52735        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3252         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE6149         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE4723         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3575         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE13164        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE9177         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE3566         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3553         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE5504         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9059         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9057         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3686         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE461978       TATCTAGATA GATAGTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE4529         TATCTAGATA GATACTTAAT TTA-TAATCA ACTTTTTT-C TTCATTAAT- TTTCATAGTT GTCATTTTTT TT--GTTTAT
INTE8628         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE3008         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE3659         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TT--GTTTAT
NAVA3850         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
PULV8532         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
MIRA7537         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTCAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAG
Clustal Co       **********  *** ****  *** **** *  ******* * ****** **  ********** ********** **  *****
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                         330        340        350        360        370        380        390        400
INTE3683         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATCTTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9353         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE1716         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE7202         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9363         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9320         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9382         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4694         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3724         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9350         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE52735        AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3252         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE6149         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4723         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3575         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE13164        AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9177         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3566         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3553         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE5504         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9059         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9057         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3686         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE461978       AAAACATAAA CAGAAAAAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4529         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA T------AAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE8628         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE3008         AAAACATAAA CAGAAATAAA AAAAAATGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE3659         AAAGCATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
NAVA3850         AAAGCATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
PULV8532         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
MIRA7537         AAAACATAAA CAGAAATAAA AAAAAATTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
Clustal Co       *** ****** ****** *** ***** * ** ********** *      *** ********** *** ****** **********
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         410        420        430        440        450        460        470        480
INTE3683         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9353         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE1716         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE7202         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9363         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9320         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9382         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4694         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3724         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9350         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE52735        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3252         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE6149         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4723         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3575         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE13164        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9177         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3566         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3553         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE5504         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9059         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9057         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3686         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE461978       AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4529         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTAAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE8628         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3008         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3659         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACATCTAC
NAVA3850         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
PULV8532         AATAGAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
MIRA7537         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         490        500        510        520        530        540        550        560
INTE3683         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9353         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE1716         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE7202         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9363         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9320         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9382         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4694         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3724         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9350         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE52735        CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3252         CACTGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE6149         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4723         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3575         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE13164        CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9177         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3566         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3553         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE5504         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9059         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9057         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3686         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE461978       CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4529         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE8628         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3008         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3659         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
NAVA3850         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
PULV8532         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
MIRA7537         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
Clustal Co       *** ****** ********** ********** ********** ********** ********** ********** **********
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                         570        580        590        600        610        620        630        640
INTE3683            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9353            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE1716            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCTA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE7202            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCTA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9363            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9320            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9382            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE4694            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3724            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9350            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE52735           TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3252            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE6149            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE4723            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3575            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE13164           TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9177            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3566            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTYTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3553            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE5504            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE9059            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CNTTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACRAATA
INTE9057            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3686            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE461978          TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE4529            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE8628            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3008            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
INTE3659            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCCA TGTTTC-TGC TTTACGAATA
NAVA3850            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCCTGC T---------
PULV8532            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
MIRA7537            TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTC-TGC TTTACGAATA
Clustal Co          ********** ********** ********** **** *** * * ******** ******** * ****** *** *
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INTE3683        TGATATT
INTE9353        TGATATT
INTE1716        TGATATT
INTE7202        TGATATT
INTE9363        TGATATT
INTE9320        TGATATT
INTE9382        TGATATT
INTE4694        TGATATT
INTE3724        TGATATT
INTE9350        TGATATT
INTE52735       TGATATT
INTE3252        TGATATT
INTE6149        TGATATT
INTE4723        TGATATT
INTE3575        TGATATT
INTE13164       TGATATT
INTE9177        TGATATT
INTE3566        TGATATT
INTE3553        TGATATT
INTE5504        TGATATT
INTE9059        TRATATT
INTE9057        TGATATT
INTE3686        TGATATT
INTE461978      TGATATT
INTE4529        TGATATT
INTE8628        TGATATT
INTE3008        TGATATT
INTE3659        TGATATT
NAVA3850        -------
PULV8532        TGTAATT
MIRA7537        TGACATT
Clustal Co
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                         10        20        30        40        50        60        70        80
INTE3683         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3553         GTCTACGGTT CGAATCCGTA TAGCCCCAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGAGAA
INTE9350         GTCTACGGTT CGAATCCGTA TAGCCCNAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9382         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE1716         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9363         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9059         GTCTACGGTT YGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4694         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4723         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3252         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE5504         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3686         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3724         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE461978       GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACCTTA AAATCAAAAT AATTGGATAA
INTE3659         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATAAAAAT AATTGGATAA
NAVA3850         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9320         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3575         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3008         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE6149         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9057         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCTAAAT AATTGGTTAA
INTE52735        GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9177         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3566         GTCTACGGTT CGAATCCGTA TAGCCCCAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
PULV8532         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAAATT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
MIRA7537         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE8628         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE13164        GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE7202         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4529         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9353         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
Clustal Co       ********** ********* ****** *** ******* ** ********** ****** *** ****  **** ******  **
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                         90        100        110        120        130        140        150        160
INTE3683         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3553         TTTTTTTACC TATTAWT--- -GGATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9350         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9382         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE1716         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9363         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE9059         TTTTTTTACT TATTATT--- -GGATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4694         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4723         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3252         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE5504         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3686         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3724         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE461978       TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3659         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
NAVA3850         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9320         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE3575         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3008         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE6149         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9057         TTTTTTTACT TATTATT--- -GGATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE52735        TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9177         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3566         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
PULV8532         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
MIRA7537         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE8628         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE13164        TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE7202         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4529         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9353         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         170        180        190        200        210        220        230        240
INTE3683         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3553         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9350         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9382         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE1716         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9363         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9059         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4694         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4723         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3252         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE5504         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3686         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3724         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE461978       ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3659         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
NAVA3850         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE9320         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3575         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3008         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE6149         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9057         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE52735        ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9177         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3566         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
PULV8532         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
MIRA7537         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACGGAAAAC CTCTTTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE8628         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE13164        ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE7202         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4529         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTTAATGGAG CCAATCACTA TCTATCGATA
INTE9353         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
Clustal Co       ******* ** ********** *** ****** *** ****** *** ****** ** ******* ******* ** **********
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                ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                     250        260        270        280        290        300        310        320
INTE3683        TATCTAGATA GATACTTAAC TTAATAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3553        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9350        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9382        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE1716        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9363        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9059        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE4694        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE4723        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3252        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE5504        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3686        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3724        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE461978      TATCTAGATA GATAGTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE3659        TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TT--GTTTAT
NAVA3850        TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE9320        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3575        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3008        TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE6149        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9057        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE52735       TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9177        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE3566        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
PULV8532        TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
MIRA7537        TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTCAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAG
INTE8628        TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE13164       TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE7202        TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE4529        TATCTAGATA GATACTTAAT TTA-TAATCA ACTTTTTT-C TTCATTAAT- TTTCATAGTT GTCATTTTTT TT--GTTTAT
INTE9353        TATCTAGATA AATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
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                         330        340        350        360        370        380        390        400
INTE3683         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATCTTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3553         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9350         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9382         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE1716         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9363         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9059         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4694         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4723         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3252         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE5504         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3686         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3724         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE461978       AAAACATAAA CAGAAAAAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3659         AAAGCATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
NAVA3850         AAAGCATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE9320         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3575         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3008         AAAACATAAA CAGAAATAAA AAAAAATGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE6149         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9057         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE52735        AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9177         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3566         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
PULV8532         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
MIRA7537         AAAACATAAA CAGAAATAAA AAAAAATTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE8628         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE13164        AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE7202         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4529         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA T------AAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE9353         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
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                        410        420        430        440        450        460        470        480
INTE3683        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3553        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9350        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9382        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE1716        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9363        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9059        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4694        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4723        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3252        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE5504        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3686        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3724        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE461978      AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3659        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACATCTAC
NAVA3850        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9320        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3575        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3008        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE6149        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9057        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE52735       AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9177        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3566        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
PULV8532        AATAGAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
MIRA7537        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE8628        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE13164       AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE7202        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4529        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTAAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9353        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
Clustal Co      **** ***** ********** ********** ****** *** ********** ********** ********** **** *****
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                         490        500        510        520        530        540        550        560
INTE3683         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3553         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9350         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9382         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE1716         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9363         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9059         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4694         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4723         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3252         CACTGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE5504         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3686         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3724         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE461978       CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3659         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
NAVA3850         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9320         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3575         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3008         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE6149         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9057         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE52735        CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9177         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3566         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
PULV8532         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
MIRA7537         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE8628         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE13164        CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE7202         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4529         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9353         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
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                         570        580        590        600        610        620        630        640
INTE3683         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3553         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9350         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9382         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE1716         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCTA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9363         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9059         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CNTTCATAGG AGTTCGTCTA TGTTTCTGCT TTACRAATAT
INTE4694         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE4723         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3252         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE5504         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3686         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3724         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE461978       TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3659         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCCA TGTTTCTGCT TTACGAATAT
NAVA3850         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCC--- ----------
INTE9320         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3575         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3008         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE6149         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9057         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE52735        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9177         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3566         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTYTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
PULV8532         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
MIRA7537         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE8628         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE13164        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE7202         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCTA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE4529         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9353         TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         650        660        670        680        690        700        710        720
INTE3683         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3553         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9350         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9382         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE1716         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9363         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9059         RATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE4694         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTCCTTGGCT CGACATTTTT TGTTCTATTT
INTE4723         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3252         GATATTTGAT CTGC-GTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE5504         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3686         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3724         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE461978       GATATTTGAT CTGC-GTGGA TTTTTTCATC CGCCACCTTT TATATAGGTG CTC-TTAGCT CGACATTTTT TGTTCTATTT
INTE3659         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
NAVA3850         --TGCTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9320         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3575         GATATTTGAT CTGCTG-GGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3008         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE6149         GATATTTGAT CTGCTG--GA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9057         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE52735        GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9177         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3566         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
PULV8532         GTAATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGTT CGACATTTTT TGTTCTATTT
MIRA7537         GACATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE8628         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE13164        GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE7202         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE4529         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9353         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
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                         730        740        750        760        770        780        790        800
INTE3683         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3553         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9350         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9382         TATCTATTTT AC-AGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE1716         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9363         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9059         TATCCATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE4694         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE4723         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3252         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE5504         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3686         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TCGAAAGTTT
INTE3724         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE461978       TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3659         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
NAVA3850         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9320         TATCTATTTT AC-AGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3575         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3008         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE6149         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9057         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TCGAAAGTTT
INTE52735        TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9177         TATCTATTTT ACCAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3566         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
PULV8532         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
MIRA7537         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE8628         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE13164        TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE7202         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE4529         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9353         TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
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                      810        820        830        840        850        860        870        880
INTE3683         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3553         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9350         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9382         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE1716         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9363         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9059         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE4694         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE4723         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3252         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE5504         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3686         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3724         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE461978       TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3659         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
NAVA3850         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE9320         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3575         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3008         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE6149         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9057         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE52735        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9177         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3566         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
PULV8532         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
MIRA7537         TTATTCCTTT CGCAGGAGTA AGGATTTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE8628         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE13164        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE7202         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE4529         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE9353         TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
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                         890        900        910        920        930        940        950        960
INTE3683         AAAAAAAAAA ---TCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3553         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9350         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9382         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE1716         AAAAAAAAAA AA-CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9363         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9059         AAAAAAAA-- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE4694         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE4723         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3252         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE5504         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3686         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3724         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE461978       AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3659         AAAAAAAAA- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
NAVA3850         AAAAAAAAAA AA-CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9320         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3575         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3008         AAAAAAAA-- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE6149         AAAAAAAAAA AA-CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9057         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE52735        AAAAAAAAAA AA-CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9177         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3566         AAAAAAAA-- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
PULV8532         AAAAAAAA-- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
MIRA7537         AAAAAAAAAA AAACCTTTCA AGCAATTTTA CAATGGAAAA GTAAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE8628         AAAAAAAAA- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE13164        AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE7202         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE4529         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTCA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9353         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
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                 970        980        990        1000       1010       1020       1030       1040
INTE3683         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3553         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9350         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9382         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE1716         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9363         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9059         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE4694         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE4723         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3252         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE5504         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3686         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3724         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE461978       AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3659         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
NAVA3850         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9320         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3575         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3008         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAA----- GGGCTTGTTG
INTE6149         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9057         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE52735        AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9177         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3566         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
PULV8532         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
MIRA7537         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE8628         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE13164        AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE7202         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE4529         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9353         AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
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                      1050       1060       1070       1080       1090       1100       1110       1120
INTE3683         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3553         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9350         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9382         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE1716         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9363         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9059         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE4694         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE4723         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3252         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE5504         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3686         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3724         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE461978       CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3659         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
NAVA3850         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAGGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9320         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3575         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3008         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE6149         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9057         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE52735        CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9177         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3566         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
PULV8532         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
MIRA7537         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTT AAAGTAAGGA TAAAGAATCC
INTE8628         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE13164        CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE7202         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE4529         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9353         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         1130       1140       1150       1160       1170       1180       1190       1200
INTE3683         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTTGA AAAAAAGAGA
INTE3553         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9350         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9382         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE1716         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATTAAA ATTGATTCGA AAAAAAGAGA
INTE9363         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9059         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE4694         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE4723         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3252         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE5504         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3686         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3724         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE461978       TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTYGA AAAAAAGAGA
INTE3659         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
NAVA3850         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9320         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3575         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3008         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE6149         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9057         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE52735        TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9177         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3566         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
PULV8532         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
MIRA7537         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE8628         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE13164        TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE7202         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATTAAA ATTGATTCGA AAAAAAGAGA
INTE4529         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9353         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
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                         1210       1220       1230       1240       1250       1260       1270       1280
INTE3683         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3553         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9350         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9382         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE1716         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9363         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9059         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE4694         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE4723         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3252         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE5504         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3686         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3724         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE461978       CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3659         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
NAVA3850         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9320         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3575         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3008         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE6149         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9057         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE52735        CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9177         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3566         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
PULV8532         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
MIRA7537         CAAACAAAAA AGGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE8628         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE13164        CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE7202         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE4529         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9353         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
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                         1290       1300       1310       1320       1330       1340       1350       1360
INTE3683         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3553         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9350         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9382         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE1716         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9363         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9059         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE4694         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE4723         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3252         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE5504         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3686         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3724         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE461978       CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3659         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
NAVA3850         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9320         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3575         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3008         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE6149         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9057         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE52735        CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9177         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3566         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
PULV8532         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGATTT CAATACAGAC TAATTGATTT
MIRA7537         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE8628         CTTGAGTTAC GAGAGTACGA GTGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE13164        CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE7202         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE4529         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9353         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
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                         1370       1380       1390       1400       1410       1420       1430       1440
INTE3683         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3553         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9350         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9382         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE1716         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9363         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9059         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE4694         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE4723         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3252         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE5504         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3686         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3724         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE461978       AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3659         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTT-TATT ATATCGAG-- ---------- ------AGTT AACTTCTACT
NAVA3850         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAG-- ---------- ------AGTT AACTTCTACT
INTE9320         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3575         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3008         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAG-- ---------- ------AGTT AACTTCTACT
INTE6149         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9057         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE52735        AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9177         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE3566         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
PULV8532         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAG-- ---------- ------AGTT AACTTCTACT
MIRA7537         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTATATT ATATAGAGCT TCTACTCAAT ATAGAGAGTT AACTTCTACT
INTE8628         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAG-- ---------- ------AGTT AACTTCTACT
INTE13164        AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE7202         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE4529         AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
INTE9353         AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ------AGTT AACTTCTACT
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                      1450       1460       1470       1480       1490       1500       1510       1520
INTE3683        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE3553        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE9350        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE9382        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE1716        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE9363        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE9059        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE4694        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE4723        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TACGA GGCCAAAACC TCCTTATACG
INTE3252        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE5504        CA-------- ---------- ---------- -TTGAATTTT TTTTCCTCGA GCCG-TACGA GGCCAAAACC TCCTTATACG
INTE3686        CA-------- ---------- ---------- -TTGAATTTT TTTTTCTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE3724        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE461978      CA-------- ---------- ---------- -TTGAATTTT TTTC--TCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE3659        CA-------- ---------- ---------- -TTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
NAVA3850        CA-------- ---------- ---------- -TTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE9320        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE3575        CA-------- ---------- ---------- -TTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE3008        CAATATAATA TAGAGAGTTA ACTTCTACTC ATTGAATTTT TTTTTCTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE6149        CA-------- ---------- ---------- -TTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE9057        CA-------- ---------- ---------- -TTGAATTTT TTTTTCTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE52735       CA-------- ---------- ---------- -TTGAATTTT TTTTTCTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE9177        CA-------- ---------- ---------- -TTGAATTTT TTTTTCTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE3566        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
PULV8532        CAATATA--- --GAGAGTTA ACTTCTACTC ATTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
MIRA7537        CA-------- ---------- ---------- -TTGAATTTT TTTTTCTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE8628        CAATATA--- --GAGAGTTA ACTTCTACTC ATTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE13164       CA-------- ---------- ---------- -TTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE7202        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCG-TATGA GGCCAAAACC TC-TTATACG
INTE4529        CA-------- ---------- ---------- -TTGAATTTT TTTT-CTCGA GCCG-TACGA GGCCAAAACC TC-TTATACG
INTE9353        CA-------- ---------- ---------- -TTGAATTTT TTTTC-TCGA GCCGATATGA GGCCAAAACC TC-TTATACG
Clustal Co      **                                *********  ***   **** **** ** ** ********** ** *******
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                 ....|....| ....|....| ....|....| ....|....| ....
                         1530       1540       1550       1560
INTE3683         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3553         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE9350         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE9382         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE1716         TTTCTAGGGG GGG--TATTA TTCATATACA TCTA-CCCAA TGAG
INTE9363         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE9059         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE4694         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE4723         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3252         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE5504         TTTCTAGGGG GGG--TATTA TTCATATACA TCTTGCCCAA TGAG
INTE3686         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3724         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE461978       TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3659         TTTCTAGGGG GGGGGTATTA TTCATATACA TCTATCCCAA TGAG
NAVA3850         TTTCTAGGGG GG--GTATTA TTCATATACA TCTATCCCAA TGAG
INTE9320         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3575         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3008         TTTCTAGGGG GGGGGTATTA TTCATATACA TCTATCCCAA TGAG
INTE6149         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE9057         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE52735        TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE9177         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE3566         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
PULV8532         TTTCTAGGGG GGG-GTATTA TTCATATACA TCTATCCCAA TGAG
MIRA7537         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE8628         TTTCTAGGGG GGG-GTATTA TTCATATACA TCTATCCCAA TGAG
INTE13164        TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE7202         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
INTE4529         TTTCTAGGGG GGG---ATTA TTCATATACA TCTATCCCAA TGAG
INTE9353         TTTCTAGGGG GGG--TATTA TTCATATACA TCTATCCCAA TGAG
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                         10         20         30         40         50         60         70         80
INTE9363         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9059         GTCTACGGTT YGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3724         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9353         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9382         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9320         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3553         GTCTACGGTT CGAATCCGTA TAGCCCCAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGAGAA
INTE3252         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3683         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4723         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE5504         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3686         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE7202         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE461978       GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACCTTA AAATCAAAAT AATTGGATAA
INTE4529         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE8628         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9350         GTCTACGGTT CGAATCCGTA TAGCCCNAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3575         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3008         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE6149         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9057         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCTAAAT AATTGGTTAA
INTE52735        GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE9177         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3566         GTCTACGGTT CGAATCCGTA TAGCCCCAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
NAVA3850         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE4694         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE1716         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE13164        GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
MIRA7537         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
INTE3659         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAA-TT GATTCTAATA AATAACATTA AAATAAAAAT AATTGGATAA
PULV8532         GTCTACGGTT CGAATCCGTA TAGCCCTAAC TAAAAAAATT GATTCTAATA AATAACATTA AAATCAAAAT AATTGGATAA
Clustal Co       **********  ********* ****** *** ******* ** ********** ****** *** ****  **** ******  **
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                          90        100        110        120        130        140        150        160
INTE9363         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE9059         TTTTTTTACT TATTATT--- -GGATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3724         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9353         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9382         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE9320         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCCT
INTE3553         TTTTTTTACC TATTAWT--- -GGATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3252         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3683         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4723         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE5504         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3686         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE7202         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE461978       TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4529         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE8628         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9350         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACC GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3575         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3008         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE6149         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9057         TTTTTTTACT TATTATT--- -GGATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE52735        TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE9177         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3566         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
NAVA3850         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE4694         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE1716         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE13164        TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
MIRA7537         TTTTTTTACT TATTATT--- -GTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
INTE3659         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
PULV8532         TTTTTTTACT TATTATTTAT TGTATTCTTT ATTTCTAACT GGTTACTTTC AATTGTTTGG TTCATAAAAA AAATTCCCAT
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                     170        180        190        200        210        220        230        240
INTE9363         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9059         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3724         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9353         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9382         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9320         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3553         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3252         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3683         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4723         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE5504         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3686         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE7202         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE461978       ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE4529         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTTAATGGAG CCAATCACTA TCTATCGATA
INTE8628         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE9350         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3575         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3008         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE6149         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9057         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE52735        ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE9177         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE3566         ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
NAVA3850         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE4694         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE1716         ACCATAAATC CTGGGGATCG TTCTGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
INTE13164        ACCATAAATC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCAGTA TCTATCGATA
MIRA7537         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACGGAAAAC CTCTTTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
INTE3659         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
PULV8532         ACCATAAGTC CTGGGGATCG TTCAGAATAA AACTGAAAAC CTCATTTTAT TTCAATGGAG CCAATCACTA TCTATCGATA
Clustal Co       ******* ** ********** *** ****** *** ****** *** ****** ** ******* ******* ** **********
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                         250        260        270        280        290        300        310        320
INTE9363         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9059         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3724         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9353         TATCTAGATA AATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9382         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9320         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3553         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3252         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3683         TATCTAGATA GATACTTAAC TTAATAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE4723         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE5504         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3686         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE7202         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE461978       TATCTAGATA GATAGTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE4529         TATCTAGATA GATACTTAAT TTA-TAATCA ACTTTTTT-C TTCATTAAT- TTTCATAGTT GTCATTTTTT TT--GTTTAT
INTE8628         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE9350         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3575         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE3008         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE6149         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9057         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE52735        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE9177         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE3566         TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
NAVA3850         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
INTE4694         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE1716         TATCTAGATA GATACTTAAC TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
INTE13164        TATCTAGATA GATACTTAAC TTA-TAATAA CCTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAT
MIRA7537         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTCAT- TTTCATAGTT GTCATTTTTT TTT-GTTTAG
INTE3659         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TT--GTTTAT
PULV8532         TATCTAGATA GATACTTAAT TTA-TAATAA ACTTTTTTTC TTCATTAAT- TTTCATAGTT GTCATTTTTT TTTTGTTTAT
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                         330        340        350        360        370        380        390        400
INTE9363         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9059         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3724         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9353         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9382         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9320         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3553         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3252         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3683         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATCTTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4723         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE5504         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3686         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE7202         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE461978       AAAACATAAA CAGAAAAAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE4529         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA T------AAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE8628         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE9350         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3575         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3008         AAAACATAAA CAGAAATAAA AAAAAATGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE6149         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9057         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE52735        AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE9177         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE3566         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
NAVA3850         AAAGCATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE4694         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE1716         AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
INTE13164        AAAACATAAA CAGAAATAAA AAAAA-TTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAAGATTAGA AACTATTAGT
MIRA7537         AAAACATAAA CAGAAATAAA AAAAAATTAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
INTE3659         AAAGCATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
PULV8532         AAAACATAAA CAGAAATAAA AAAAA-TGAC TAGTTATTAA TCATATTAAT ATTATATTAT TAATATTAGA AACTATTAGT
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         410        420        430        440        450        460        470        480
INTE9363         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9059         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3724         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9353         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9382         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9320         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3553         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3252         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3683         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4723         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE5504         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3686         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE7202         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE461978       AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4529         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTAAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE8628         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9350         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3575         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3008         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE6149         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9057         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE52735        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE9177         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3566         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
NAVA3850         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE4694         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE1716         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE13164        AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
MIRA7537         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
INTE3659         AATATAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACATCTAC
PULV8532         AATAGAAACA TGGAAATATT AAGTAATAAG TGTACTGAAA ATAAGATTAC AATCAATAAA TCTTAAAATG CGACGTCTAC
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                         490        500        510        520        530        540        550        560
INTE9363         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9059         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3724         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9353         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9382         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9320         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3553         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3252         CACTGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3683         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4723         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE5504         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3686         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE7202         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE461978       CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4529         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE8628         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9350         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3575         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3008         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE6149         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9057         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE52735        CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE9177         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3566         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
NAVA3850         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE4694         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE1716         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE13164        CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
MIRA7537         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
INTE3659         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
PULV8532         CACAGCAACC AAACGAAAAT AAATGGTTCG ATTAACCTGA ATTTTTGTTT TGACTTAAGA GTTCTATATC CCTTGGCCAA
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                      570        580        590        600        610        620        630        640
INTE9363        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9059        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CNTTCATAGG AGTTCGTCTA TGTTTCTGCT TTACRAATAT
INTE3724        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9353        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9382        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9320        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3553        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3252        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3683        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE4723        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE5504        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3686        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE7202        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCTA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE461978      TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE4529        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE8628        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9350        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3575        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3008        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE6149        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9057        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE52735       TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE9177        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3566        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTYTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
NAVA3850        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCC--- ----------
INTE4694        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE1716        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCTA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE13164       TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
MIRA7537        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
INTE3659        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCCA TGTTTCTGCT TTACGAATAT
PULV8532        TCGACTCCGA TTGGAATTGA CTAAGTGGGT ATTTTTTCCA CATTCATAGG AGTTCGTCTA TGTTTCTGCT TTACGAATAT
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                 ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....| ....|....|
                         650        660        670        680        690        700        710        720
INTE9363         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9059         RATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3724         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9353         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9382         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9320         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3553         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3252         GATATTTGAT CTGC-GTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3683         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE4723         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE5504         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3686         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE7202         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE461978       GATATTTGAT CTGC-GTGGA TTTTTTCATC CGCCACCTTT TATATAGGTG CTC-TTAGCT CGACATTTTT TGTTCTATTT
INTE4529         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE8628         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9350         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3575         GATATTTGAT CTGCTG-GGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3008         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE6149         GATATTTGAT CTGCTG--GA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9057         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE52735        GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE9177         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3566         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
NAVA3850         --TGCTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE4694         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTCCTTGGCT CGACATTTTT TGTTCTATTT
INTE1716         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE13164        GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
MIRA7537         GACATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
INTE3659         GATATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGCT CGACATTTTT TGTTCTATTT
PULV8532         GTAATTTGAT CTGCTGTGGA TTTTTTCATC CGCCACTTTT TATATAGGTG CTC-TTGGTT CGACATTTTT TGTTCTATTT
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                 730        740        750        760        770        780        790        800
INTE9363     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9059     TATCCATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3724     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9353     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9382     TATCTATTTT AC-AGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9320     TATCTATTTT AC-AGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3553     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3252     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3683     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE4723     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE5504     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3686     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TCGAAAGTTT
INTE7202     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE461978   TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE4529     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE8628     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9350     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3575     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3008     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE6149     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9057     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TCGAAAGTTT
INTE52735    TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE9177     TATCTATTTT ACCAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3566     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
NAVA3850     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE4694     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE1716     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE13164    TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
MIRA7537     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
INTE3659     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
PULV8532     TATCTATTTT ACTAGAGTCC TACACTTTTT TGGAATATAA AAAAGAGCAC AGGATGGAGC TCGAGGAGAA TAGAAAGTTT
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                     810        820        830        840        850        860        870        880
INTE9363        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9059        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3724        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9353        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9382        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9320        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3553        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3252        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3683        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE4723        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE5504        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3686        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE7202        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE461978      TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE4529        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE8628        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE9350        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3575        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3008        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE6149        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9057        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE52735       TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE9177        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3566        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
NAVA3850        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
INTE4694        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE1716        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE13164       TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
MIRA7537        TTATTCCTTT CGCAGGAGTA AGGATTTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAGTCT TTTTATATTG
INTE3659        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
PULV8532        TTATTCCTTT CGCAGGAGTA AGGATCTAGG GTTAGTGCGA ATCAATAAGT TATTCCAACT TCGTAAATCT TTTTATATTG
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                         890        900        910        920        930        940        950        960
INTE9363         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9059         AAAAAAA--- A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3724         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9353         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9382         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9320         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3553         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3252         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3683         AAAAAAAAAA ---TCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE4723         AAAAAAAAA- A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE5504         AAAAAAAAA- A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3686         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE7202         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE461978       AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE4529         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTCA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE8628         AAAAAAAAA- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9350         AAAAAAAAA- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3575         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3008         AAAAAAAA-- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE6149         AAAAAAAAAA AA-CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9057         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE52735        AAAAAAAAAA AA-CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE9177         AAAAAAAAAA A--CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3566         AAAAAAAA-- ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
NAVA3850         AAAAAAAAAA AA-CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE4694         AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE1716         AAAAAAAAAA AA-CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE13164        AAAAAAAAAA ---CCTTTCA AGCAATTTTA CAATGGAAAA GTCAATTTTA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
MIRA7537         AAAAAAAAAA AAACCTTTCA AGCAATTTTA CAATGGAAAA GTAAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
INTE3659         AAAAAAAAA- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
PULV8532         AAAAAAAA-- ---CCTTTCA AGAAATTTTA CAATGGAAAA GTCAATTTAA TTTTCTTAAA ATTGTAAAAT TCTTTGAATC
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                 970        980        990       1000       1010       1020       1030       1040
INTE9363     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9059     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3724     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9353     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9382     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9320     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3553     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3252     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3683     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE4723     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE5504     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3686     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE7202     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE461978   AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE4529     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE8628     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9350     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3575     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3008     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAA----- GGGCTTGTTG
INTE6149     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9057     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE52735    AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE9177     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3566     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
NAVA3850     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE4694     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE1716     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE13164    AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
MIRA7537     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
INTE3659     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
PULV8532     AAAAGTCTAT CATGTGTGAA TCAAGCGTTT GTATGATTCT TTGATGGAAA AAAATCATAA ATAAAATAAG GGGCTTGTTG
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                       1050       1060       1070       1080       1090       1100       1110       1120
INTE9363         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9059         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3724         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9353         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9382         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9320         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3553         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3252         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3683         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE4723         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE5504         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3686         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE7202         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE461978       CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE4529         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE8628         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9350         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3575         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3008         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE6149         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9057         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE52735        CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE9177         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE3566         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
NAVA3850         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAGGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE4694         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE1716         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
INTE13164        CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
MIRA7537         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTT AAAGTAAGGA TAAAGAATCC
INTE3659         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
PULV8532         CTGCCCTTTT TTAATAAAAC GATTCAAGAT CACCGAAGTA ATGTCTAAAC CCAAAGATTC AAAGTAAGGA TAAAGAATCC
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                         1130       1140       1150       1160       1170       1180       1190       1200
INTE9363         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9059         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3724         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9353         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9382         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9320         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3553         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3252         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3683         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTTGA AAAAAAGAGA
INTE4723         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE5504         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3686         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE7202         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATTAAA ATTGATTCGA AAAAAAGAGA
INTE461978       TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTYGA AAAAAAGAGA
INTE4529         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE8628         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9350         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3575         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3008         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE6149         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9057         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE52735        TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE9177         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3566         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
NAVA3850         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE4694         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE1716         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATTAAA ATTGATTCGA AAAAAAGAGA
INTE13164        TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
MIRA7537         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
INTE3659         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
PULV8532         TGAAACAAGG AAATCCAGTT TTCAATTGTT TGAACAACTA GATCAGAATG AAGAATCAAA ATTGATTCGA AAAAAAGAGA
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                         1210       1220       1230       1240       1250       1260       1270       1280
INTE9363         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9059         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3724         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9353         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9382         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9320         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3553         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3252         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3683         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE4723         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE5504         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3686         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE7202         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE461978       CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE4529         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE8628         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9350         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3575         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3008         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE6149         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9057         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE52735        CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE9177         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3566         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
NAVA3850         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE4694         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE1716         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE13164        CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
MIRA7537         CAAACAAAAA AGGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
INTE3659         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
PULV8532         CAAACAAAAA AAGGGTTAGA GACTACTCAA TAAAAAAAGT ACTTAAGGAT TCTCTCTTGA GATATTTGAG AGTTATTTAA
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                         1290       1300       1310       1320       1330       1340       1350       1360
INTE9363         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9059         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3724         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9353         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9382         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9320         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3553         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3252         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3683         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE4723         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE5504         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3686         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE7202         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE461978       CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE4529         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE8628         CTTGAGTTAC GAGAGTACGA GTGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9350         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3575         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3008         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE6149         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9057         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE52735        CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE9177         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3566         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
NAVA3850         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE4694         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE1716         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE13164        CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
MIRA7537         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
INTE3659         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGGTTT CAATACAGAC TAATTGATTT
PULV8532         CTTGAGTTAC GAGAGTACGA ATGTTACGAA TGCTTTTTAT GTAAAAAATA TTTAGGATTT CAATACAGAC TAATTGATTT
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                 1370       1380       1390       1400       1410       1420       1430       1440
INTE9363     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE9059     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3724     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE9353     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE9382     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE9320     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3553     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3252     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3683     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE4723     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE5504     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3686     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE7202     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE461978   AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE4529     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATAT------ ---------- ---------- ---AGAGAGT
INTE8628     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAGAG TTAACTTCTA CTCAATAT-- ---AGAGAGT
INTE9350     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3575     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3008     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAGAG TTAACTTCTA CTCAATATAA TATAGAGAGT
INTE6149     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE9057     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE52735    AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE9177     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE3566     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
NAVA3850     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAGAG TTAACT---- ---------- ----------
INTE4694     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE1716     AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
INTE13164    AATGTTTTTA TTAATATATT TAATATTTGA ATTTTCTATT ATATAGAG-- ---------- ---------- -------AGT
MIRA7537     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTATATT ATATAGAGCT TCTACTCAAT AT-------- ---AGAGAGT
INTE3659     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTT-TATT ATATCGAGAG TTAACT---- ---------- ----------
PULV8532     AATGTTTTTA TTAATCTATT TAATATTTGA ATTTTCTATT ATATCGAGAG TTAACTTCTA CTCAATAT-- ---AGAGAGT
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                         1450       1460       1470       1480       1490       1500       1510       1520
INTE9363         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE9059         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3724         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE9353         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCGATAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE9382         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE9320         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3553         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3252         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3683         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE4723         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAC GAGGCCAAAA CCTCCTTATA CGTTTCTAGG GGGGG--TAT
INTE5504         TAACTTCTAC TCATTGAATT TTTTTTCCTC GAGCCG-TAC GAGGCCAAAA CCTCCTTATA CGTTTCTAGG GGGGG--TAT
INTE3686         TAACTTCTAC TCATTGAATT TTTTTTTCTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE7202         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE461978       TAACTTCTAC TCATTGAATT TTTTTC--TC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE4529         TAACTTCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG---AT
INTE8628         TAACTTCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG-GTAT
INTE9350         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3575         TAACTTCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3008         TAACTTCTAC TCATTGAATT TTTTTTTCTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGGGGTAT
INTE6149         TAACTTCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE9057         TAACTTCTAC TCATTGAATT TTTTTTTCTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE52735        TAACTTCTAC TCATTGAATT TTTTTTTCTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE9177         TAACTTCTAC TCATTGAATT TTTTTTTCTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3566         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
NAVA3850         -----TCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGG--GTAT
INTE4694         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE1716         TAACTTCTAC TCATTGAATT TTTTTTC-TC GAGCCG-TAT GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE13164        TAACTTCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
MIRA7537         TAACTTCTAC TCATTGAATT TTTTTTTCTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG--TAT
INTE3659         -----TCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGGGGTAT
PULV8532         TAACTTCTAC TCATTGAATT TTTTTT-CTC GAGCCG-TAC GAGGCCAAAA CCTC-TTATA CGTTTCTAGG GGGGG-GTAT
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                         1530       1540       1550       1560       1570       1580       1590       1600
INTE9363         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE9059         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3724         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE9353         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE9382         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE9320         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3553         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3252         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3683         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE4723         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE5504         TATTCATATA CATCTTGCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3686         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE7202         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE461978       TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE4529         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE8628         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE9350         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3575         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3008         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC YACTCTCGGY
INTE6149         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGTGAAC ATATTATCAC CACTCTCGGT
INTE9057         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE52735        TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE9177         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3566         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
NAVA3850         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGC
INTE4694         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE1716         TATTCATATA CATCTA-CCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE13164        TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
MIRA7537         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
INTE3659         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC TACTCTCGGC
PULV8532         TATTCATATA CATCTATCCC AATGAGTCGA TACCTTGACC AAACAGAACG ACCCGCGAAC CTATTATCAC CACTCTCGGT
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                         1610       1620       1630       1640       1650       1660       1670       1680
INTE9363         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9059         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3724         GGGYTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9353         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9382         GGTTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9320         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3553         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3252         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3683         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE4723         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE5504         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3686         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE7202         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE461978       GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE4529         GGGCTGGTTT CCTAACCGAT CCCTTCCCGC CGGATCCGTG GTTTCGTGTA TCTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE8628         GGGCTGGTTT CATAACCGAT CCCTTCCCGC CGGATCCGTG GTTTCGTGTA TCTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9350         GGKTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3575         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCKGTC
INTE3008         GGGYTGGTTT CCTAACCGAT CCCTTCCCGC CGGATCCGTG GTTTCGTGYA TTTGTCCCRR CGGTGAGTTT TCTCTCGGTC
INTE6149         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9057         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCKGTC
INTE52735        GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE9177         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE3566         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
NAVA3850         GGGCTGGTTT CCTAACCGAT CCCTTCCCGC CGGATCCGTG GTTTCGTGTA TCTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE4694         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE1716         GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
INTE13164        GGGTTGGTTT CCTAACCGAT TCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGGTGAGTTT TCTCTCGGTC
MIRA7537         GGGCTGGTTT CCTAACCTAT CCCTTCTCGC CGGATCCGTG GTTTCGTGTA TTTGTCCCGG CGATGAGTTT TCTCTCGGTT
INTE3659         GGGCTGGTTT CCTAACCGAT CCCTTCCCGC CGGATCCGTG GTTTCGTGCA TTTGTCCCGA CGGTGAGTTT TCTCTCGATC
PULV8532         GGGCTGGTTT CCTAACCGAT CCCTTCCCGC CGGATCCGTG GTTTCGTGTA TTTGTCCTGG CGGTGAGTTT TCTCTCGGTC
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                         1690       1700       1710       1720       1730       1740       1750       1760
INTE9363         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE9059         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3724         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE9353         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE9382         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE9320         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3553         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3252         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3683         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE4723         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE5504         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3686         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE7202         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE461978       GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE4529         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE8628         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE9350         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3575         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3008         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACGAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE6149         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATAAAACATA ACGGCCTTCA
INTE9057         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE52735        GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE9177         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3566         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
NAVA3850         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACGAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE4694         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE1716         GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE13164        GGGGCATGCA CGTTGCTTCC GGATAAAAAC AAAACCACGG CACAAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
MIRA7537         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACGAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
INTE3659         GGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACGAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
PULV8532         TGGGCATGCA CGTTGCTTCC GGATAAACAC AAAACCACGG CACGAAAAGT GTCAAGGAAC ATGAAACATA ACGGCCTTCA
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                         1770       1780       1790       1800       1810       1820       1830       1840
INTE9363         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGYGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9059         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3724         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TRTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9353         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9382         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9320         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3553         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3252         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3683         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TRTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE4723         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE5504         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3686         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE7202         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE461978       CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE4529         CTCGCCTCGG CCGGAAACGG TGCGTGGGCG TATGTTGAGC CGTGATATAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE8628         CTCGCCTCGG CCGGAAACGG TGCGTGGGCG TATGTTGAGC CGTGATATAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9350         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3575         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3008         CTCGYCTCGC CCGGAAACGG TGCGTGCGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE6149         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9057         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE52735        CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE9177         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3566         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
NAVA3850         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE4694         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE1716         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE13164        CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TGTGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
MIRA7537         CTCGCCTCGC CCGGAAACGG TGCGTGGGCG TATGTCGAGC CGCGATATAA AGTCTAAAAC GACTCTCGGC AACGGATATC
INTE3659         CTCGTCTCGC CCGGAAACGG TGCGTGCGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAC GACTCTCGGC AACGGATATC
PULV8532         CTCGCCTCGC CCGGAAACGG TGCGTTGGCG TATGTCGAGC CGCGATCTAA AGTCTAAAAT GACTCTCGGC AACGGATATC
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                        1850       1860       1870       1880       1890       1900       1910       1920
INTE9363         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9059         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3724         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9353         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9382         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9320         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3553         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3252         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3683         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE4723         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE5504         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3686         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE7202         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE461978       TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE4529         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE8628         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9350         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3575         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3008         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE6149         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9057         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE52735        TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE9177         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3566         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
NAVA3850         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE4694         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE1716         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE13164        TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
MIRA7537         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
INTE3659         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
PULV8532         TCGGCTCTCG CATCGATGAA GAACGTAGCG AAATGCGATA CTTGGTGTGA ATTGCAGAAT CCCGTGAACC ATCGAGTCTT
Clustal Co       ********** ********** ********** ********** ********** ********** ********** **********
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                         1930       1940       1950       1960       1970       1980       1990       2000
INTE9363         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE9059         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3724         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE9353         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE9382         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE9320         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3553         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3252         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3683         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE4723         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE5504         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3686         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE7202         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE461978       TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE4529         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCCTCATCTT
INTE8628         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCCTCATCTT
INTE9350         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3575         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3008         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCCTCATCTT
INTE6149         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE9057         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE52735        TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE9177         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3566         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
NAVA3850         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE4694         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE1716         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE13164        TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
MIRA7537         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCATCATCTT
INTE3659         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCGAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCCTCATCTT
PULV8532         TGAACGCAAG TTGCGCCCGA AGCCTCTAGG CCAAGGGCAC GTCTGCCTGG GTGTCACAAA TCGTCGTCCC CCTTCATCTT
Clustal Co       ********** ********** ********** ** ******* ********** ********** ********** ** *******
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                     2010       2020       2030       2040       2050       2060       2070       2080
INTE9363        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9059        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3724        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9353        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9382        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9320        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3553        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3252        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3683        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE4723        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAATGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE5504        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3686        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE7202        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE461978      TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE4529        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGCGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE8628        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGCGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9350        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3575        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3008        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGMGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE6149        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9057        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE52735       TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE9177        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGYGGGAGC
INTE3566        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
NAVA3850        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE4694        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE1716        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE13164       TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
MIRA7537        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTCAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
INTE3659        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGAGCTAAC GCGAACGGTT GGCCAAAATC CGAGCCAAGG ACGCGGGAGC
PULV8532        TCGGTGATTC GGGACGGAAG CTGGTCTCCC GTGTGCTTAC GCGAACGGTT GGCCAAAATT CGAGCCAAGG ATGCGGGAGC
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                         2090       2100       2110       2120       2130       2140       2150       2160
INTE9363         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCA AAGCTCTTGA TGACCCAAAG
INTE9059         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3724         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE9353         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CRTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE9382         GTTCCGACAT AYGGTGGTGA ACGTTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE9320         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3553         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3252         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3683         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CRTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE4723         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCA AAGCTCTTGA TGACCCAAAG
INTE5504         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3686         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE7202         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CRTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE461978       GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE4529         GTTCCGACAT ACGGTGGTGA ACATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTCGA TGACCCAAAG
INTE8628         GTTCCGACAT ACGGTGGTGA ACATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTCGA TGACCCAAAG
INTE9350         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3575         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3008         GTTCCGACAT ACGGTGGTGA ACATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AWGCTCTYGA TGACCCAAAG
INTE6149         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE9057         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE52735        GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE9177         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3566         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
NAVA3850         GTTCCGACAT ACGGTGGTGA AAATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE4694         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE1716         GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE13164        GTTCCGACAT ACGGTGGTGA ACGTTGATCC ACTCGCATAC CGTCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
MIRA7537         GTTCCGACAT ACGGTGGTGA ACATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
INTE3659         GTTCCGACAT ACGGTGGTGA ACATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG ATGCTCTCGA TGACCCAAAG
PULV8532         GTTCCGACAT ACGGTGGTGA ACATTGATCC ACTCGCATAC CATCGGTCGC TCCTCTCCCG AAGCTCTTGA TGACCCAAAG
Clustal Co       ********** * ******** *  ******* ********** * ******** *********  * ***** ** **********
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                 ....|....| ....|....| ....|....| ....|...
                         2170       2180       2190
INTE9363         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9059         TCTTCTAAGC RACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3724         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9353         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9382         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9320         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3553         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3252         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3683         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE4723         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE5504         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3686         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE7202         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE461978       TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE4529         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE8628         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9350         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3575         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3008         TCTTCTGAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE6149         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9057         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE52735        TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE9177         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3566         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
NAVA3850         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE4694         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE1716         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE13164        TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
MIRA7537         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
INTE3659         TCTTCTGAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
PULV8532         TCTTCTAAGC GACCCCAGGT CAGGCGGGAT CACCCGCT
Clustal Co       ****** ***  ********* ********** ********
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