

Figure S1A: haplotype = U98.5\_Cobitis sp BIWAE typeC1

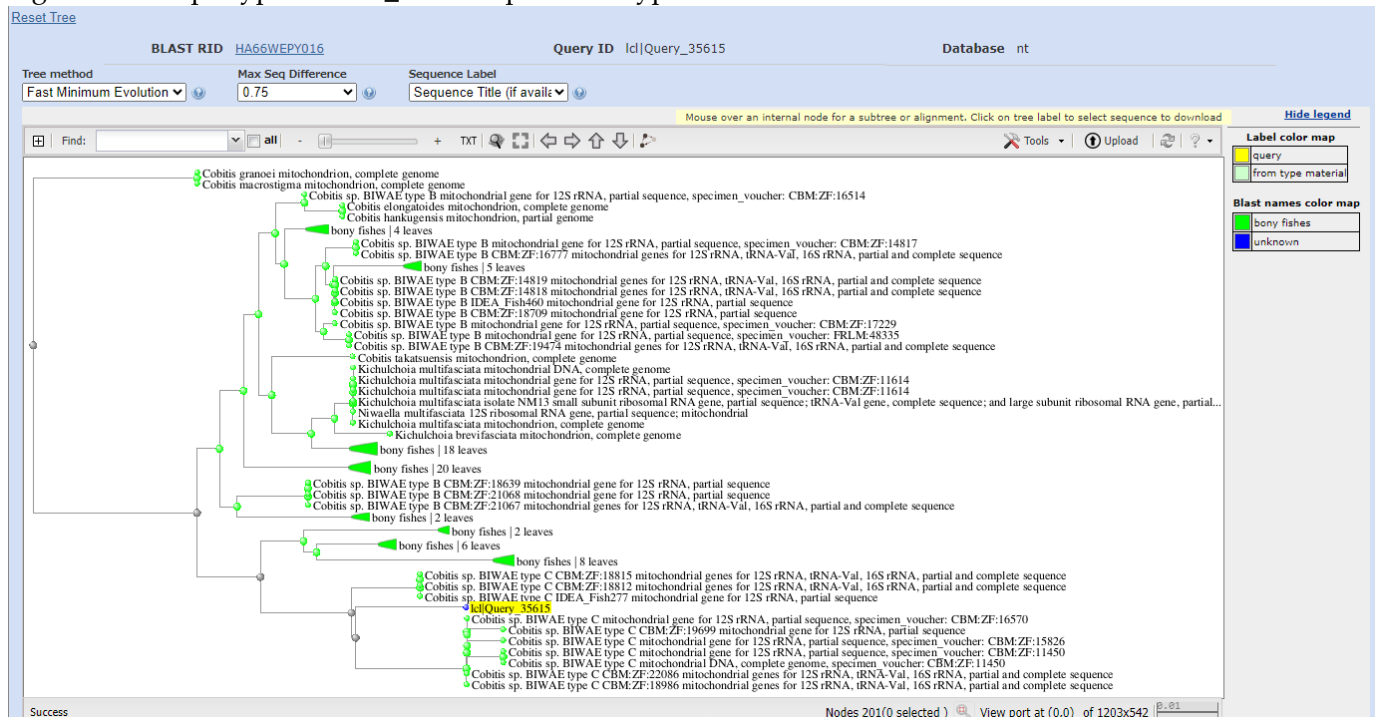


Figure S1B: haplotype = U98.5\_Cobitis sp BIWAE typeC2

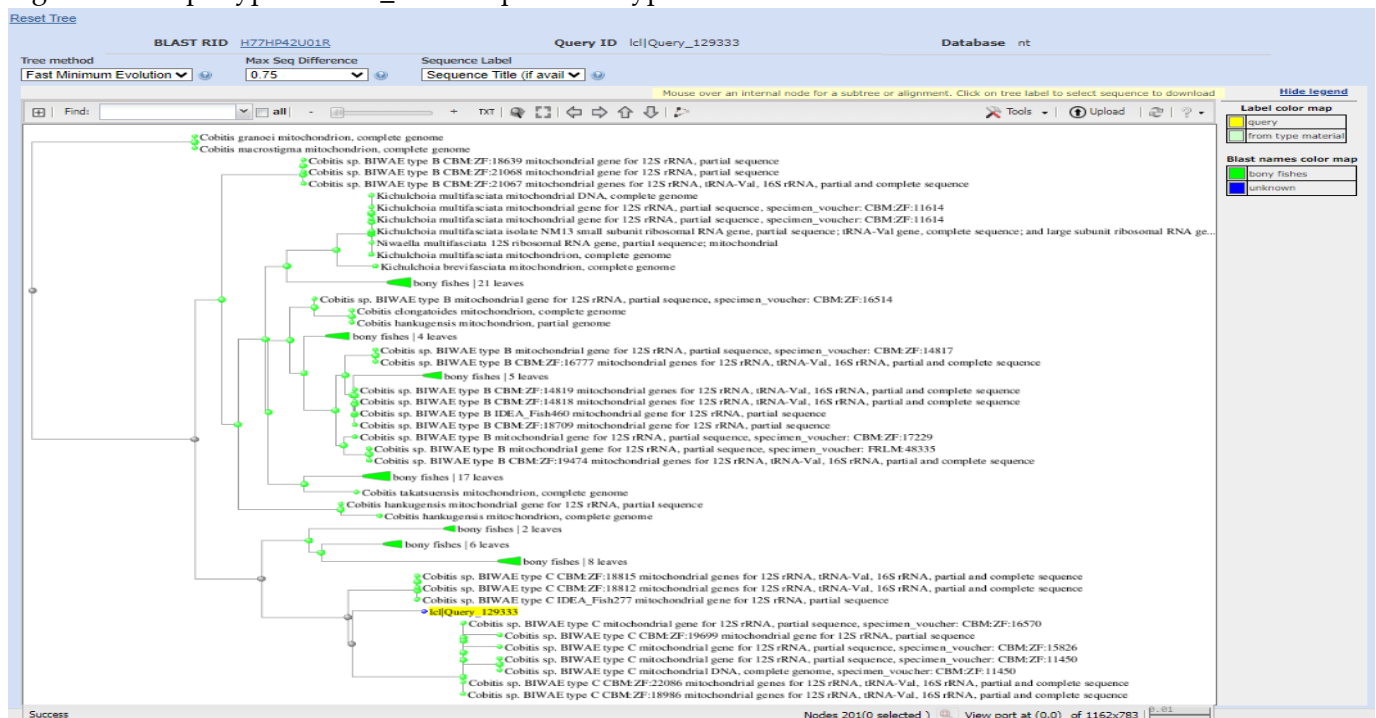


Figure S1C: haplotype = U98.5\_Cobitis sp BIWAE typeC3

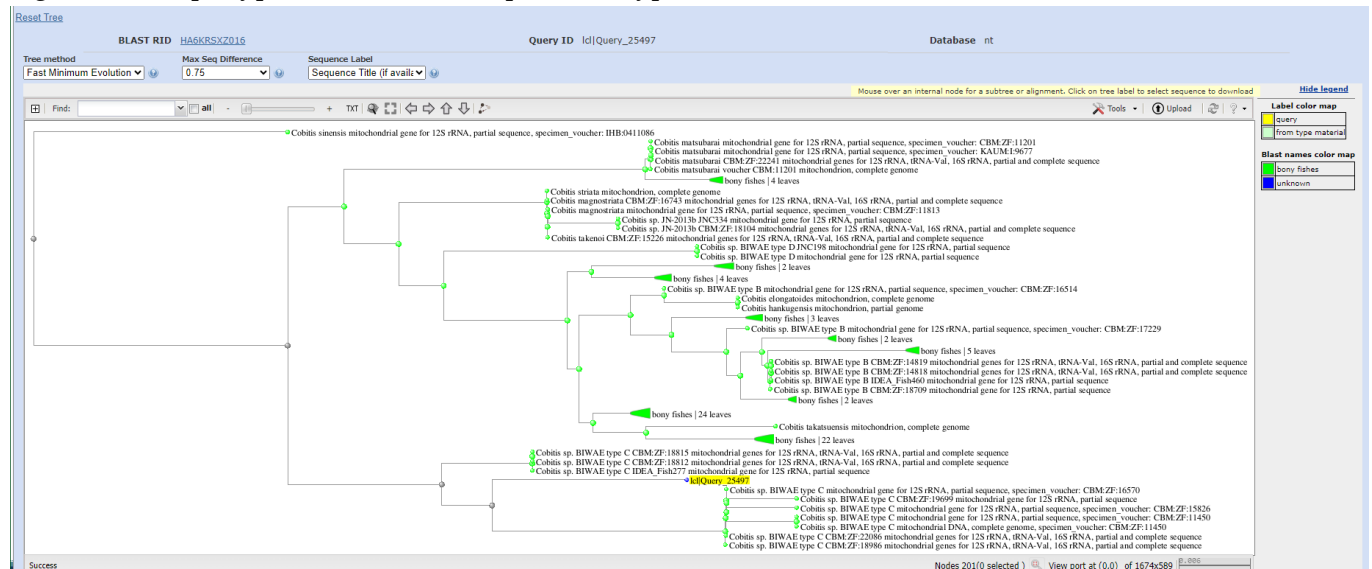


Figure S1D: haplotype = Cottus reinii

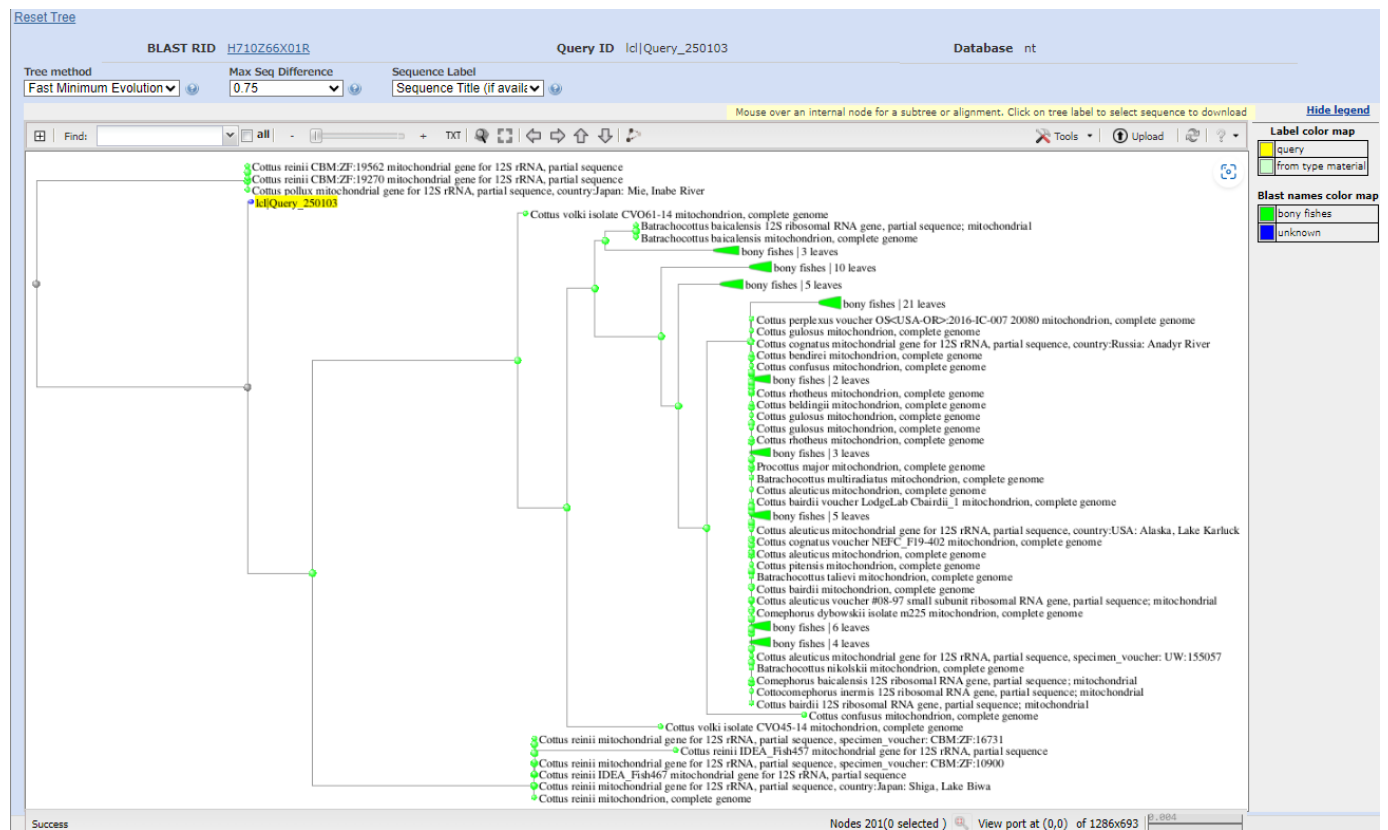


Figure S1E: haplotype = U98.5\_ *Cottus reinii*

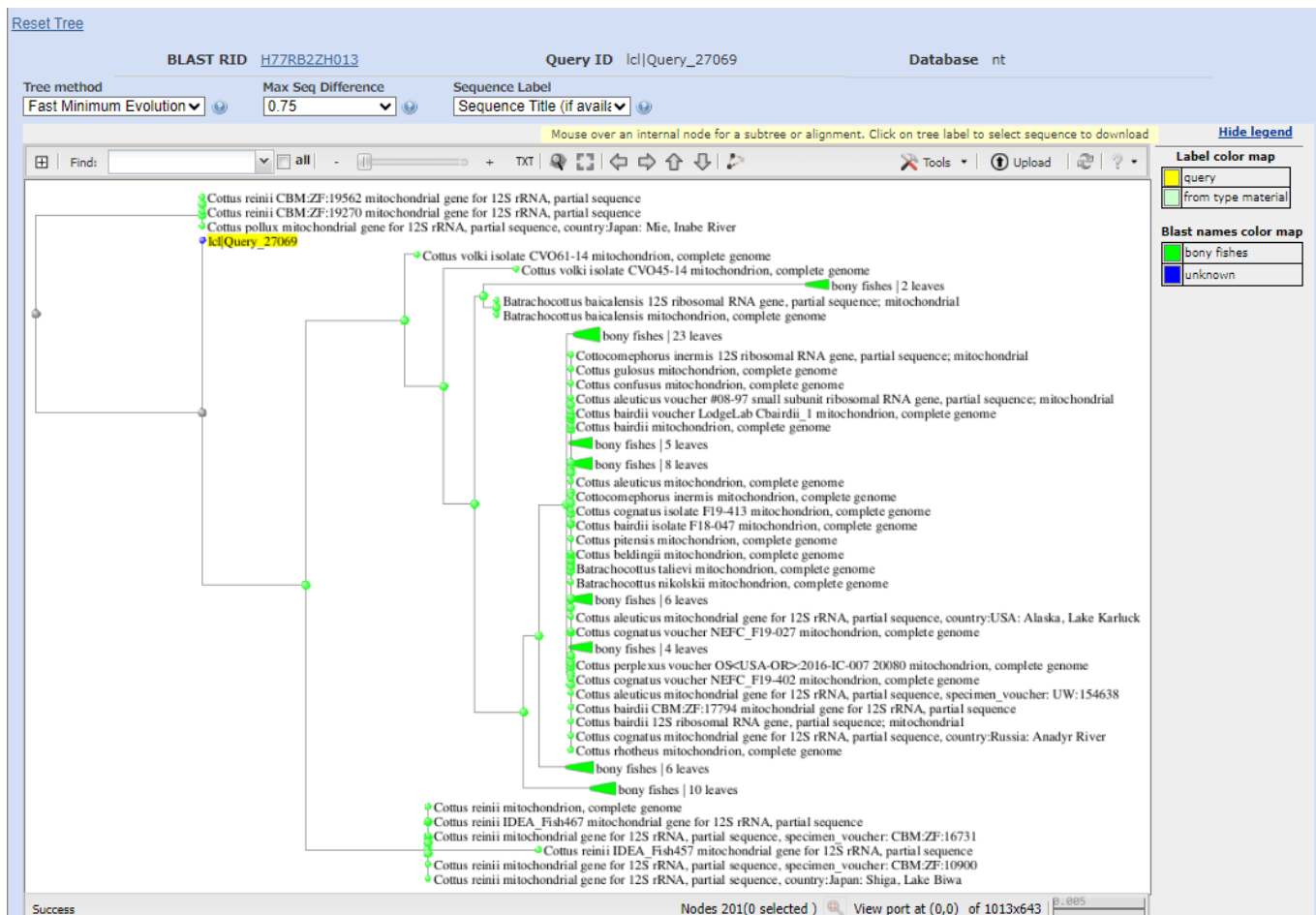


Figure S1 Blast clustering of species containing distant (> 2 nt diff) haplotypes with the GenBank database. A–C, *Cobitis* sp. BIWAE type C; D–E, *Cottus reinii*. See Table S2 for haplotype ID and number of differences.

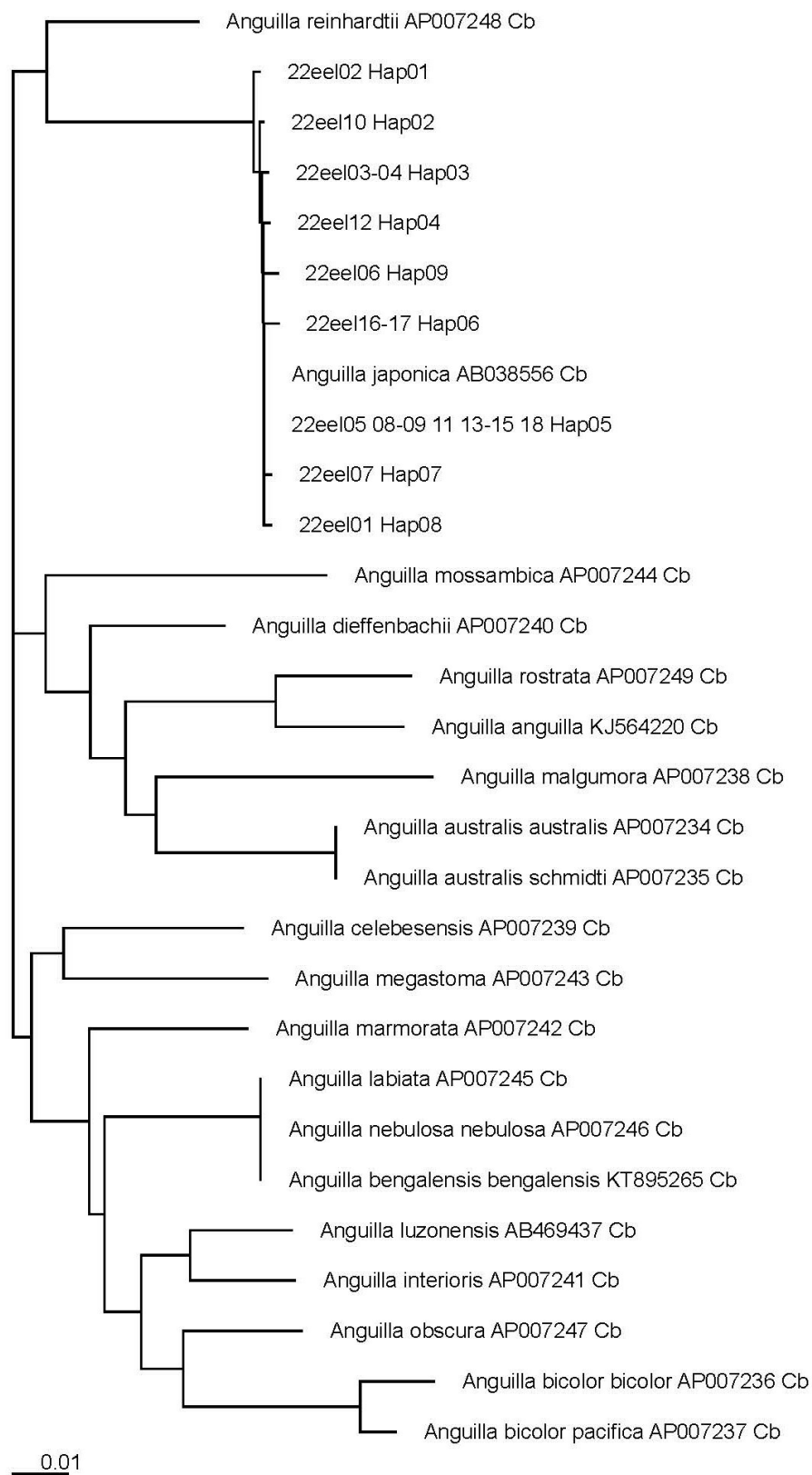


Figure S2 NJ tree drawn by MEGA7 (Kumar et al 2016, Mol Biol Evol 33:1870–1874; K2P model) of Cytb sequences from eels.

Table S1 Number of reads after filtering steps

| Sites             | Samples<br>Replicate | Raw read | Merged              | Quality filter      | Denoise             |
|-------------------|----------------------|----------|---------------------|---------------------|---------------------|
| Left bank         | Replicate 1          | 291,355  | 276,913<br>(95.04%) | 276,771<br>(94.99%) | 266,793<br>(91.57%) |
|                   | Replicate 2          | 316,222  | 300,284<br>(94.96%) | 300,095<br>(94.90%) | 289,372<br>(91.51%) |
| Center<br>of flow | Replicate 1          | 269,549  | 256,423<br>(95.13%) | 256,255<br>(95.07%) | 245,747<br>(91.17%) |
|                   | Replicate 2          | 307,082  | 289,167<br>(94.17%) | 288,979<br>(94.10%) | 278,291<br>(90.62%) |
| Right bank        | Replicate 1          | 320,925  | 303,460<br>(94.56%) | 303,260<br>(94.50%) | 292,001<br>(90.99%) |
|                   | Replicate 2          | 291,289  | 275,418<br>(94.55%) | 275,231<br>(94.49%) | 264,603<br>(90.84%) |
| NC                | -                    | 7,617    | 6,944<br>(91.16%)   | 6,916<br>(90.80%)   | 6,349<br>(83.35%)   |

Table S2 Converged haplotypes, species assignment and mapped reads.

| Haplotype                                      | Assigned                                       | Length | Diff<br>MiFish | Diff<br>Blast | Left bank | Center of<br>flow | Right<br>bank | NC |
|--|--|--------|----------------|---------------|-----------|-------------------|---------------|----|
| Lethenteron spN                                | <i>Lethenteron</i> sp.N                        | 182    | 0              | 0             | 0         | 0                 | 11            | 0  |
| Anguilla anguilla1                             | <i>Anguilla anguilla</i>                       | 171    | 0              | 0             | 54        | 569               | 281           | 0  |
| Anguilla anguilla2                             |  | 171    | 1              | 1             | 12        | 0                 | 0             | 0  |
| SUM  |  |        |                |               | 66        | 569               | 281           | 0  |
| Anguilla japonica1                             |  | 169    | 0              | 0             | 7417      | 12579             | 10931         | 0  |
| Anguilla japonica2                             | <i>Anguilla japonica</i>                       | 169    | 1              | 0             | 0         | 0                 | 906           | 0  |
| SUM  |  |        |                |               | 7417      | 12579             | 11837         | 0  |
| Anguilla rostrata                              | <i>Anguilla rostrata</i>                       | 169    | 0              | 0             | 0         | 36                | 0             | 0  |
| Carassius auratus subsp * <sup>1</sup>         | <i>Carassius langsdorfii</i>                   | 173    | 0              | 0             | 3825      | 590               | 0             | 0  |
| Carassius cuvieri * <sup>1</sup>               | <i>Carassius cuvieri</i>                       | 173    | 0              | 0             | 0         | 578               | 1158          | 0  |
| Cyprinus carpio1                               | <i>Cyprinus carpio</i>                         | 173    | 0              | 0             | 2235      | 943               | 2444          | 0  |
| Cyprinus carpio2 * <sup>1</sup>                |  | 173    | 0              | 0             | 9685      | 8220              | 14785         | 0  |
| Cyprinus carpio3 * <sup>1</sup>                |  | 173    | 0              | 0             | 1977      | 2076              | 11161         | 0  |
| SUM  |  |        |                |               | 13897     | 11239             | 28390         | 0  |
| Nipponocypris temminckii                       | <i>Candidia temminckii</i>                     | 177    | 0              | 0             | 22889     | 28735             | 39263         | 0  |
| Phoxinus steindachneri                         | <i>Rhynchocypris lagowskii steindachneri</i>   | 176    | 0              | 0             | 0         | 312               | 246           | 0  |
| Tanakia tanago1                                | <i>Pseudorhodeus tanago</i>                    | 178    | 0              | 0             | 2685      | 1235              | 399           | 0  |
| Tanakia tanago2                                |  | 178    | 1              | 0             | 982       | 429               | 0             | 0  |
| Tanakia tanago3                                |  | 178    | 2              | 1             | 56        | 0                 | 0             | 0  |
| SUM  |  |        |                |               | 3723      | 1664              | 399           | 0  |
| Tribolodon hakonensis                          | <i>Pseudaspius hakonensis</i>                  | 176    | 0              | 0             | 302217    | 211997            | 205452        | 24 |
| Tribolodon sachalinensis                       | <i>Pseudaspius sachalinensis</i>               | 176    | 2              | 2             | 283       | 29                | 0             | 0  |
| Zacco platypus                                 | <i>Zacco platypus</i>                          | 176    | 0              | 0             | 45853     | 37922             | 39856         | 0  |
| Misgurnus anguillicaudatus                     | <i>Misgurnus anguillicaudatus</i>              | 172    | 0              | 0             | 2356      | 442               | 1048          | 0  |
| Misgurnus sp CladeA                            | <i>Misgurnus chipisaniensis</i>                | 173    | 0              | 0             | 111       | 82                | 163           | 0  |
| U98.5_Cobitis sp BIWAE typeC1                  | <i>Cobitis</i> sp. BIWAE type C * <sup>2</sup> | 173    | 5              | 4             | 8734      | 6491              | 7140          | 0  |
| U98.5_Cobitis sp BIWAE typeC2                  |  | 173    | 6              | 5             | 2195      | 1467              | 2632          | 0  |
| U98.5_Cobitis sp BIWAE typeC3                  |  | 173    | 6              | 5             | 0         | 243               | 0             | 0  |
| SUM  |  |        |                |               | 10929     | 8201              | 9772          | 0  |
| U98.5_Lefua echigonia gotu1                    | <i>Lefua echigonia</i>                         | 174    | 3              | 0             | 57406     | 26880             | 24161         | 40 |
| Hypomesus nipponensis * <sup>1</sup>           | <i>Hypomesus nipponensis</i>                   | 168    | 0              | 0             | 135       | 348               | 108           | 0  |
| Plecoglossus altivelis1 * <sup>1</sup>         | <i>Plecoglossus altivelis altivelis</i>        | 168    | 0              | 0             | 1086      | 1881              | 3121          | 0  |
| Plecoglossus altivelis2 * <sup>1</sup>         |  | 168    | 2              | 1             | 42        | 0                 | 67            | 0  |
| Plecoglossus altivelis altivelis               |  | 168    | 1              | 1             | 0         | 62                | 0             | 0  |
| SUM  |  |        |                |               | 1128      | 1943              | 3188          | 0  |
| Oncorhynchus keta1                             | <i>Oncorhynchus keta</i>                       | 169    | 0              | 0             | 963       | 2534              | 2245          | 0  |
| Oncorhynchus keta2                             |  | 169    | 1              | 1             | 94        | 0                 | 0             | 0  |
| SUM  |  |        |                |               | 1057      | 2534              | 2245          | 0  |
| Oncorhynchus masou masou * <sup>1</sup>        | <i>Oncorhynchus masou masou</i>                | 169    | 0              | 0             | 2787      | 9594              | 9542          | 0  |
| Salvelinus leucomaenis imbricus * <sup>1</sup> | <i>Salvelinus leucomaenis</i>                  | 170    | 0              | 0             | 0         | 110               | 0             | 0  |
| Cottus reinii * <sup>1</sup>                   | <i>Cottus reinii</i> * <sup>2</sup>            | 169    | 2              | 2             | 605       | 0                 | 0             | 0  |
| U98.5_Cottus reinii                            |  | 170    | 3              | 3             | 0         | 171               | 0             | 0  |
| SUM  |  |        |                |               | 605       | 171               | 0             | 0  |
| Lateolabrax japonicus                          | <i>Lateolabrax japonicus</i>                   | 170    | 0              | 0             | 978       | 0                 | 0             | 0  |
| Lepomis macrochirus * <sup>1</sup>             | <i>Lepomis macrochirus</i>                     | 168    | 0              | 0             | 351       | 288               | 723           | 0  |
| Rhinogobius sp BF * <sup>1</sup>               | <i>Rhinogobius fluviatilis</i>                 | 169    | 0              | 0             | 48110     | 110493            | 106468        | 0  |
| Tridentiger sp1 * <sup>1</sup>                 | <i>Tridentiger</i> sp.                         | 168    | 0              | 0             | 954       | 2811              | 2359          | 0  |
| Tridentiger sp2 * <sup>1</sup>                 |  | 168    | 1              | 1             | 91        | 0                 | 0             | 0  |
| SUM  |  |        |                |               | 1045      | 2811              | 2359          | 0  |
| Takifugu niphobles                             | <i>Takifugu alboplumbeus</i>                   | 171    | 1              | 0             | 0         | 262               | 0             | 0  |

Number of converged haplotypes = 41    Number of assigned species/genera = 28

\*<sup>1</sup> Identical or equally close to some other species/subspecies out of geographic range.

\*<sup>2</sup> Assignment aided by clustering with blast.

Table S3 Sequences of Cytb from eel specimens

|                   | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
|-------------------|------------|------------|------------|------------|------------|------------|
|                   | 5          | 15         | 25         | 35         | 45         | 55         |
| 22eel102_Hap01    | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel110_Hap02    | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel103-04_Hap03 | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel112_Hap04    | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel105-08-09_11 | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel116-17_Hap06 | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel107_Hap07    | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel101_Hap08    | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| 22eel106_Hap09    | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_japonica_AB038  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_luzonensis_AB4  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_australis_aust  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGATGC | CCTAGTGGAT |
| A_australis_schm  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGATGC | CCTAGTGGAT |
| A_bicolor_bicolo  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGATGC | CCTAGTGGAT |
| A_bicolor_pacifi  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGATGC | CCTAGTGGAT |
| A_malgumora_AP00  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGACGC | CCTAGTGGAT |
| A_celebesensis_A  | ATGGCAAGCC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_dieffenbachii_  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_interioris_AP0  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_marmorata_AP00  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_megastoma_AP00  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_mossambica_AP0  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_labiata_AP0072  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_nebulosa_nebul  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_obscura_AP0072  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGATGC | CCTAGTGGAT |
| A_reinhardtii_AP  | ATGGCAAACC | TACGAAAAAC | CCACCCACTC | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_rostrata_AP007  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAATGATGC | CCTAGTGGAT |
| A_anguilla_KJ564  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
| A_bengalensis_be  | ATGGCAAACC | TACGAAAAAC | CCACCCACTT | CTAAAAATTG | CTAACGATGC | CCTAGTGGAT |
|                   | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
|                   | 65         | 75         | 85         | 95         | 105        | 115        |
| 22eel102_Hap01    | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| 22eel110_Hap02    | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| 22eel103-04_Hap03 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| 22eel112_Hap04    | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| 22eel05_08-09_11 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| 22eel16-17_Hap06 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| 22eel07_Hap07    | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | tCTCTCTCCT | AGGACTATGC |
| 22eel01_Hap08    | CTACCAACCC | CATCCAACAT | TTCAGtATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| 22eel06_Hap09    | CTACCAACCC | CATCCAAtAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| A_japonica_AB038 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| A_luzonensis_AB4 | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_australis_aust | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGT |
| A_australis_schm | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGT |
| A_bicolor_bicolo | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_bicolor_pacifi | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGT |
| A_malgumora_AP00 | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCACTCCT | TGGATTATGC |
| A_celebesensis_A | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_dieffenbachii_ | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_interioris_AP0 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGT |
| A_marmorata_AP00 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_megastoma_AP00 | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGC |
| A_mossambica_AP0 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGACTATGT |
| A_labiata_AP0072 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_nebulosa_nebul | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_obscura_AP0072 | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_reinhardtii_AP | CTACCAACCC | CCTCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |
| A_rostrata_AP007 | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTTCT | AGGATTATGT |
| A_anguilla_KJ564 | CTACCAACCC | CATCCAATAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTTCT | AGGATTATGT |
| A_bengalensis_be | CTACCAACCC | CATCCAACAT | TTCAGCATGA | TGAAATTTTG | GCTCTCTCCT | AGGATTATGC |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 125        | 135        | 145        | 155        | 165        | 175        |

|                  |             |            |            |            |            |            |
|------------------|-------------|------------|------------|------------|------------|------------|
| 22eel02_Hap01    | CTTATtTCGC  | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel10_Hap02    | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel03-04_Hap03 | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel12_Hap04    | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel05_08-09_11 | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel16-17_Hap06 | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel07_Hap07    | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel01_Hap08    | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| 22eel06_Hap09    | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| A_japonica_AB038 | CTTATTTTCGC | AAATCCTTAC | AGGATTATTC | CTAGCAATAC | ACTACACATC | AGACATTTCa |
| A_luzonensis_AB4 | CTTATCTCAC  | AAATCATCAC | AGGACTATTT | CTAGCCATAC | ACTACACATC | AGACATTTCa |



|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| A_australis_aust | CTCATCTCAC | AAATCCTTAC | AGGATTATTC | CTAGCCATAC | ACTATACATC | AGACATCTCA |
| A_australis_schm | CTCATCTCAC | AAATCCTTAC | AGGATTATTC | CTAGCCATAC | ACTATACATC | AGACATCTCA |
| A_bicolor_bicolo | CTTATCTCAC | AAATCGTCAC | AGGACTATTC | CTAGCCATAC | ACTATACATC | AGACATTTCA |
| A_bicolor_pacifi | CTTATCTCAC | AAATCGTTAC | AGGACTATTC | CTAGCCATAC | ACTATACATC | AGACATTTCA |
| A_malgumora_AP00 | CTTATCTCAC | AAATCCTCAC | AGGACTATTC | CTAGCCATAC | ATTATACATC | AGATATCTCA |
| A_celebesensis_A | CTTATCTCAC | AAATCGTTAC | AGGATTATTC | CTAGCCATAC | ACTACACATC | AGACATCTCA |
| A_dieffenbachii_ | CTTATCTCAC | AAATCCTTAC | AGGATTATTC | CTAGCCATAC | ACTATACATC | AGACATCTCA |
| A_interioris_AP0 | CTTATCTCAC | AAATCATCAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATTTCA |
| A_marmorata_AP00 | CTAATCTCAC | AAATCATCAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATCTCA |
| A_megastoma_AP00 | CTTATCTCCC | AAATAGTTAC | AGGATTATTC | CTAGCCATAC | ACTACACATC | AGACATCTCA |
| A_mossambica_AP0 | CTTATCTCTC | AAATCCTTAC | AGGACTGTTT | CTAGCCATAC | ACTACACATC | AGACATTTCA |
| A_labiata_AP0072 | CTTATCTCAC | AAATCATCAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATTTCA |
| A_nebulosa_nebul | CTTATCTCAC | AAATCATCAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATTTCA |
| A_obscura_AP0072 | CTTATTTTAC | AAATCGTCAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATTTCA |
| A_reinhardtii_AP | CTTATCTCAC | AAATCCTTAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATCTCA |
| A_rostrata_AP007 | CTTATTTTAC | AAATCCTTAC | AGGACTATTC | CTAGCCATAC | ATTATACATC | AGACATCTCA |
| A_anguilla_KJ564 | CTTATTTTAC | AAATCCTTAC | AGGACTATTC | CTAGCCATAC | ATTATACATC | AGACATCTCA |
| A_bengalensis_be | CTTATCTCAC | AAATCATCAC | AGGACTATTC | CTAGCCATAC | ACTACACATC | AGACATTTCA |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 185        | 195        | 205        | 215        | 225        | 235        |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| 22eel02_Hap01    | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel10_Hap02    | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel03-04_Hap03 | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel12_Hap04    | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel05-08-09_11 | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel16-17_Hap06 | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel07_Hap07    | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel01_Hap08    | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| 22eel06_Hap09    | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| A_japonica_AB038 | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTCATCCGA |
| A_luzonensis_AB4 | ACTGCCTTTT | CCTCAGTAGC | CCACATTTGC | CGAGATGTTA | ACTACGGATG | ATTAATCCGC |
| A_australis_aust | ACCGCCTTCT | CCTCAGTAGC | CCACATCTGC | CGAGACGTCA | ACTATGGATG | ATTAATTCGT |
| A_australis_schm | ACCGCCTTCT | CCTCAGTAGC | CCACATCTGC | CGAGACGTCA | ACTATGGATG | ATTAATTCGT |
| A_bicolor_bicolo | ACCGCCTTCT | CCTCAGTAGC | CCATATTTGT | CGAGACGTTA | ACTACGGATG | ACTAATCCGC |
| A_bicolor_pacifi | ACCGCCTTCT | CCTCAGTAGC | CCATATTTGC | CGAGACGTTA | ACTACGGATG | ACTAATCCGC |
| A_malgumora_AP00 | ACCGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGATGTCA | ACTACGGATG | ATTAATCCGC |
| A_celebesensis_A | ACCGCCTTCT | CTTCAGTAGC | CCACATCTGC | CGAGACGTCA | ATTACGGATG | ATTGATCCGT |
| A_dieffenbachii_ | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ACTACGGATG | ATTAATCCGT |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| A_interioris_AP0 | ACCGCCTTTT | CCTCAGTAGC | CCACATTTGT | CGAGACGTTA | ACTACGGATG | ATTAATCCGT |
| A_marmorata_AP00 | ACTGCCTTTT | CCTCAGTAGC | CCACATTTGC | CGAGACGTTA | ATTATGGGTG | ACTAATCCGC |
| A_megastoma_AP00 | ACCGCATTCT | CCTCAGTAGC | CCACATTTGC | CGAGACGTTA | ATTACGGATG | ATTAATCCGT |
| A_mossambica_AP0 | ACTGCCTTTT | CCTCAGTGGC | CCACATCTGC | CGAGATGTCA | ACTATGGATG | ATTAATCCGT |
| A_labiata_AP0072 | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTAATTCGC |
| A_nebulosa_nebul | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTAATTCGC |
| A_obscura_AP0072 | ACTGCTTTCT | CCTCAGTAGC | CCACATTTGC | CGAGATGTAA | ATTACGGATG | ATTAATCCGC |
| A_reinhardtii_AP | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTGATCCGC |
| A_rostrata_AP007 | ACTGCCTTCT | CCTCAGTAGC | TCACATCTGC | CGAGACGTCA | ACTATGGATG | ATTAATTCGC |
| A_anguilla_KJ564 | ACTGCCTTCT | CCTCAGTAGC | TCACATCTGC | CGAGACGTCA | ACTATGGATG | ACTAATTCGC |
| A_bengalensis_be | ACTGCCTTTT | CCTCAGTAGC | CCACATCTGC | CGAGACGTTA | ATTATGGATG | ATTAATTCGC |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 245        | 255        | 265        | 275        | 285        | 295        |

|                  |            |             |            |            |            |             |
|------------------|------------|-------------|------------|------------|------------|-------------|
| 22eel02_Hap01    | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel10_Hap02    | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel03-04_Hap03 | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel12_Hap04    | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel05-08-09_11 | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel16-17_Hap06 | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel07_Hap07    | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel01_Hap08    | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| 22eel06_Hap09    | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| A_japonica_AB038 | AATTTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATCTGCC | TCTACCTACA | CATTGCCCCGA |
| A_luzonensis_AB4 | AACCTACATG | CAAACGGGGC  | CTCCTTCTTC | TTTATTTGCC | TATATCTCCA | TATTGCCCCGA |
| A_australis_aust | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTCATTTGCC | TCTACCTCCA | CATTGCCCCGA |
| A_australis_schm | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTCATTTGCC | TCTACCTCCA | CATTGCCCCGA |
| A_bicolor_bicolo | AACCTACATG | CAAACGGGAGC | CTCATTCTTC | TTCATTTGTC | TGTACCTTCA | CATCGCCCCGA |
| A_bicolor_pacifi | AACCTACATG | CAAACGGGAGC | CTCATTCTTC | TTCATTTGTC | TGTACCTTCA | CATCGCCCCGA |
| A_malgumora_AP00 | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTTATTTGCC | TCTACCTCCA | CATTGCCCCGA |
| A_celebesensis_A | AACCTACATG | CAAACGGGAGC | CTCCTTCTTT | TTCATTTGCC | TCTACCTACA | CATTGCCCCGA |
| A_dieffenbachii_ | AACCTACATG | CAAACGGGAGC | CTCATTCTTC | TTTATTTGCC | TCTACCTCCA | CATTGCCCCGA |
| A_interioris_AP0 | AACCTACATG | CAAACGGGAGC | CTCTTCTTTC | TTCATTTGCC | TATATCTTCA | CATTGCCCCGA |
| A_marmorata_AP00 | AACCTACATG | CAAACGGGAGC | CTCCTTCTTT | TTCATCTGCC | TATACCTTCA | CATTGCCCCGA |
| A_megastoma_AP00 | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTCATCTGCC | TCTACCTACA | CATTGCCCCGA |
| A_mossambica_AP0 | AACCTACATG | CAAATGGGAGC | TTCTTCTTTC | TTCATCTGCC | TCTACCTCCA | CATTGCCCCGA |
| A_labiata_AP0072 | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTCATTTGCC | TATATCTTCA | CATTGCCCCGA |
| A_nebulosa_nebul | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTCATTTGCC | TATATCTTCA | CATTGCCCCGA |
| A_obscura_AP0072 | AACCTACATG | CAAACGGGAGC | CTCCTTCTTC | TTTATTTGCC | TGTACCTTCA | CATTGCCCCGA |

|                  |            |            |            |            |            |             |
|------------------|------------|------------|------------|------------|------------|-------------|
| A_reinhardtii_AP | AACTTACATG | CAAACGGAGC | CTCCTTCTTC | TTTATTTGTC | TCTACCTGCA | CATTGCCCCGA |
| A_rostrata_AP007 | AACCTACATG | CAAATGGGGC | CTCATTCTTC | TTTATCTGCC | TATACCTTCA | CATTGCCCCGA |
| A_anguilla_KJ564 | AACCTACATG | CAAATGGAGC | CTCATTCTTC | TTTATCTGCC | TATACCTCCA | CATTGCCCCGA |
| A_bengalensis_be | AACCTACATG | CAAACGGAGC | CTCCTTCTTC | TTCATTTGCC | TATATCTTCA | CATTGCCCCGA |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 305        | 315        | 325        | 335        | 345        | 355        |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| 22eel02_Hap01    | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel10_Hap02    | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel03-04_Hap03 | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel12_Hap04    | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel05-08-09_11 | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel16-17_Hap06 | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTt |
| 22eel07_Hap07    | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel01_Hap08    | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| 22eel06_Hap09    | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| A_japonica_AB038 | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| A_luzonensis_AB4 | GGACTTTACT | ACGGCTCATA | TCTTTATAAA | GAAACATGAA | ACATCGGAGT | CGTGCTATTC |
| A_australis_aust | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAGACATGAA | ACATCGGAGT | TGTATTATTT |
| A_australis_schm | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAGACATGAA | ACATCGGAGT | TGTATTATTT |
| A_bicolor_bicolo | GGACTTTACT | ACGGATCGTA | TCTTTATAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| A_bicolor_pacifi | GGACTTTACT | ACGGATCATA | TCTTTATAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| A_malgumora_AP00 | GGACTTTACT | ACGGCTCATA | TCTTTACAAA | GAGACATGAA | ACATTGGAGT | AGTATTATTC |
| A_celebesensis_A | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATTGGAGT | CGTACTATTC |
| A_dieffenbachii_ | GGACTTTACT | ACGGCTCATA | CCTTTACAAA | GAAACATGAA | ACATTGGAGT | CGTATTATTC |
| A_interioris_AP0 | GGACTTTACT | ACGGCTCATA | TCTTTACAAA | GAGACATGAA | ACATCGGAGT | CGTGCTATTC |
| A_marmorata_AP00 | GGACTTTACT | ACGGTTCATA | TCTTTACAAA | GAAACATGAA | ACATCGGAGT | CGTACTATTC |
| A_megastoma_AP00 | GGACTTTACT | ACGGCTCGTA | CCTTTATAAA | GAGACATGAA | ACATCGGAGT | TGTATTATTC |
| A_mossambica_AP0 | GGACTTTACT | ACGGCTCATA | TCTTTACAAA | GAGACATGAA | ACATCGGAGT | TGTATTATTC |
| A_labiate_AP0072 | GGGCTTTACT | ACGGCTCGTA | CCTTTACAAA | GAAACATGAA | ACATCGGGGT | CGTACTATTC |
| A_nebulosa_nebul | GGGCTTTACT | ACGGCTCGTA | CCTTTACAAA | GAAACATGAA | ACATCGGGGT | CGTACTATTC |
| A_obscura_AP0072 | GGACTTTACT | ACGGATCATA | TCTTTACAAA | GAAACATGAA | ACATTGGAGT | CGTACTATTC |
| A_reinhardtii_AP | GGACTTTACT | ACGGCTCATA | TCTTTATAAA | GAGACATGAA | ACATCGGAGT | CGTACTATTC |
| A_rostrata_AP007 | GGACTTTACT | ACGGCTCATA | TCTTTACAAA | GAAACATGAA | ACATTGGAGT | CGTATTATTC |
| A_anguilla_KJ564 | GGGCTTTACT | ACGGCTCATA | CCTTTACATA | GAAACATGAA | ACATTGGAGT | TGTATTATTC |
| A_bengalensis_be | GGGCTTTACT | ACGGCTCGTA | CCTTTACAAA | GAAACATGAA | ACATCGGGGT | CGTACTATTC |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 365        | 375        | 385        | 395        | 405        | 415        |

|                   |            |            |            |            |            |            |
|-------------------|------------|------------|------------|------------|------------|------------|
| 22eel02_Hap01     | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel10_Hap02     | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel03-04_Hap03  | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel12_Hap04     | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel05_08-09_11  | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel16-17_Hap06  | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel07_Hap07     | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel01_Hap08     | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| 22eel06_Hap09     | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| A_japonica_AB038  | CTATTAGTAA | TAATAACTGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTC |
| A_luzonensis_AB4  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | AATATCATTC |
| A_australis_aust  | CTATTAGTAA | TAATAACAGC | ATTCGTGGGA | TACGTACTTC | CATGAGGACA | AATATCGTTC |
| A_australis_schm  | CTATTAGTAA | TAATAACAGC | ATTCGTGGGA | TACGTACTTC | CATGAGGACA | AATATCGTTC |
| A_bicolor_bicolo  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TACGTACTTC | CATGAGGACA | AATATCATTC |
| A_bicolor_pacifi  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TACGTACTTC | CATGAGGACA | AATATCATTC |
| A_malgumora_AP00  | CTACTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTCC | CGTGAGGACA | AATATCATTC |
| A_celebesensis_A  | CTACTAGTAA | TAATAACAGC | ATTCGTAGGG | TACGTACTTC | CATGAGGACA | AATATCATTC |
| A_dieffenbachii_  | CTGCTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | AATATCATTC |
| A_interioris_AP0  | CTACTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | AATATCATTC |
| A_marmorata_AP00  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | AATATCATTC |
| A_megastoma_AP00  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | AATATCATTC |
| A_mossambica_AP0  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | AATATCATTC |
| A_labiatea_AP0072 | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTT |
| A_nebulosa_nebul  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTT |
| A_obscura_AP0072  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGACA | GATATCATTC |
| A_reinhardtii_AP  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTTC | CATGAGGGCA | AATATCATTC |
| A_rostrata_AP007  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGG | TATGTACTTC | CATGAGGACA | GATATCATTC |
| A_anguilla_KJ564  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTGCTTC | CATGAGGACA | GATATCATTC |
| A_bengalensis_be  | CTATTAGTAA | TAATAACAGC | ATTCGTAGGA | TATGTACTCC | CATGAGGACA | AATATCATTT |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 425        | 435        | 445        | 455        | 465        | 475        |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| 22eel02_Hap01    | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTgC | CATACGTAGG | GGACTCCTTA |
| 22eel10_Hap02    | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| 22eel03-04_Hap03 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| 22eel12_Hap04    | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| 22eel05_08-09_11 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| 22eel16-17_Hap06 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| 22eel07_Hap07    | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| 22eel101_Hap08   | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| 22eel106_Hap09   | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| A_japonica_AB038 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTAC | CATACGTAGG | GGACTCCTTA |
| A_luzonensis_AB4 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCTGCCGTCC | CATACGTAGG | AGACTCACTA |
| A_australis_aust | TGAGGTGCTA | CAGTAATTAC | CAACCTACTG | TCAGCCGTCC | CATACATAGG | AAACTCCCTA |
| A_australis_schm | TGAGGTGCTA | CAGTAATTAC | CAACCTACTG | TCAGCCGTCC | CATACATAGG | AAACTCCCTA |
| A_bicolor_bicolo | TGAGGTGCCA | CAGTAATTAC | CAATCTACTA | TCTGCCGTCC | CATACGTAGG | AGACTCACTA |
| A_bicolor_pacifi | TGAGGTGCCA | CAGTAATTAC | CAATCTACTA | TCTGCCGTTC | CATACGTAGG | AGACTTACTA |
| A_malgumora_AP00 | TGAGGCGCTA | CAGTAATTAC | CAACTTACTA | TCCGCCGTCC | CATACGTAGG | AAACTCCTA  |
| A_celebesensis_A | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCTGCCGTCC | CATACGTAGG | AGACTCCCTA |
| A_dieffenbachii_ | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCTGCCGTAC | CATACGTAGG | AAACTCCCTA |
| A_interioris_AP0 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCTGCCGTCC | CATACGTAGG | AGACTCACTA |
| A_marmorata_AP00 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCCGTCC | CATACGTAGG | AGACTCACTA |
| A_megastoma_AP00 | TGAGGCGCTA | CAGTAATTAC | CAACCTACTA | TCTGCCGTCC | CATACGTGGG | AGACTCCCTA |
| A_mossambica_AP0 | TGAGGCGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTCC | CATACGTAGG | AGACTCCCTA |
| A_labiata_AP0072 | TGAGGCGCTA | CAGTAATTAC | CAACCTACTA | TCTGCAGTCC | CATACGTAGG | AGACTCACTA |
| A_nebulosa_nebul | TGAGGCGCTA | CAGTAATTAC | CAACCTACTA | TCTGCAGTCC | CATACGTAGG | AGACTCACTA |
| A_obscura_AP0072 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCCGTCC | CATATGTAGG | AGACTCACTA |
| A_reinhardtii_AP | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCCGCTGTCC | CATATGTAGG | GAATCCCTA  |
| A_rostrata_AP007 | TGAGGTGCTA | CAGTAATTAC | CAATCTATTA | TCTGCCGTCC | CATACGTAGG | AAACTCCCTA |
| A_anguilla_KJ564 | TGAGGTGCTA | CAGTAATTAC | CAACCTACTA | TCTGCCGTCC | CATATGTCGG | GAATCCCTA  |
| A_bengalensis_be | TGAGGCGCTA | CAGTAATTAC | CAACCTACTA | TCTGCAGTCC | CATACGTAGG | AGACTCACTA |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 485        | 495        | 505        | 515        | 525        | 535        |

|                   |            |            |            |            |            |            |
|-------------------|------------|------------|------------|------------|------------|------------|
| 22eel102_Hap01    | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel110_Hap02    | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel103-04_Hap03 | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel112_Hap04    | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel105-08-09_11 | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel116-17_Hap06 | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel107_Hap07    | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel101_Hap08    | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| 22eel106_Hap09    | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_japonica_AB038  | GTTCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_luzonensis_AB4  | GTCCAATGAA | TCTGAGGGGG | CTTCTCAGTT | GATAACGCCA | CACTAACCCG | ATTCTTCGCA |
| A_australis_aust  | GTCCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_australis_schm  | GTCCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_bicolor_bicolo  | GTCCAATGAA | TCTGGGGAGG | CTTCTCAGTT | GACAACGCCA | CACTAACCCG | ATTCTTCGCA |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| A_bicolor_pacifi | GTCCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CACTAACCCG | ATTCTTCGCA |
| A_malgumora_AP00 | GTCCAATGAA | TCTGAGGGGG | ATTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_celebesensis_A | GTCCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CATTAACCTG | ATTCTTCGCA |
| A_dieffenbachii_ | GTCCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCCA | CACTAACCCG | ATTCTTCGCA |
| A_interioris_AP0 | GTCCAATGAA | TCTGAGGAGG | ATTCTCAGTT | GATAACGCCA | CACTAACCCG | ATTCTTCGCA |
| A_marmorata_AP00 | GTCCAATGAA | TTTGAGGAGG | CTTTTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_megastoma_AP00 | GTACAGTGAA | TCTGAGGAGG | CTTCTCAGTT | GACAACGCTA | CATTAACCCG | ATTCTTCGCA |
| A_mossambica_AP0 | GTCCAATGAA | TCTGAGGAGG | CTTCTCAGTT | GACAATGCCA | CATTAACCCG | ATTCTTCGCA |
| A_labiata_AP0072 | GTCCAATGAA | TCTGAGGGGG | CTTCTCAGTT | GACAACGCCA | CACTAACCCG | ATTCTTCGCA |
| A_nebulosa_nebul | GTCCAATGAA | TCTGAGGGGG | CTTCTCAGTT | GACAACGCCA | CACTAACCCG | ATTCTTCGCA |
| A_obscura_AP0072 | GTCCAATGAA | TCTGAGGAGG | CTTTTCAGTT | GACAACGCTA | CACTAACCCG | ATTCTTCGCA |
| A_reinhardtii_AP | GTCCAATGAA | TCTGAGGGGG | CTTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_rostrata_AP007 | GTCCAATGAA | TCTGAGGGGG | CTTTTCAGTC | GACAACGCCA | CATTGACCCG | ATTCTTCGCA |
| A_anguilla_KJ564 | GTCCAATGAA | TCTGAGGGGG | ATTCTCAGTT | GACAACGCCA | CATTAACCCG | ATTCTTCGCA |
| A_bengalensis_be | GTCCAATGAA | TCTGAGGGGG | CTTCTCAGTT | GACAACGCCA | CACTAACCCG | ATTCTTCGCA |

|      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|
| .... | .... | .... | .... | .... | .... | .... |
| 545  | 555  | 565  | 575  | 585  | 595  |      |

|                  |            |            |            |            |            |             |
|------------------|------------|------------|------------|------------|------------|-------------|
| 22eel02_Hap01    | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel10_Hap02    | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel03-04_Hap03 | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel12_Hap04    | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel05-08-09_11 | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel16-17_Hap06 | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel07_Hap07    | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel01_Hap08    | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| 22eel06_Hap09    | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCaCT  | CCTATTCCTC  |
| A_japonica_AB038 | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCATCT | CCTATTCCTC  |
| A_luzonensis_AB4 | TTCCACTTCC | TATTCCCAT  | TGTAGTTGCC | GGTGCTACAA | TAATTCACCT | CCTCTTCCTC  |
| A_australis_aust | TTCCACTTCC | TGTTCCCAT  | TGTAGTTGCC | GGAGCTACAA | TACTTCATCT | CCTATTCCTC  |
| A_australis_schm | TTCCACTTCC | TGTTCCCAT  | TGTAGTTGCC | GGAGCTACAA | TACTTCATCT | CCTATTCCTC  |
| A_bicolor_bicolo | TTCCACTTCC | TATTCCCAT  | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTGTTCCCTA |
| A_bicolor_pacifi | TTCCACTTCC | TATTCCCAT  | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTATTCCTA  |
| A_malgumora_AP00 | TTCCACTTCC | TATTCCCAT  | CGTAGTTGCT | GGGGCCACAA | TACTCCACCT | CCTGTTCCCTC |
| A_celebesensis_A | TTCCACTTCC | TATTCCCAT  | TGTAGTTGCC | GGTGCTACAA | TAATTCACCT | CTTATTCCTC  |
| A_dieffenbachii_ | TTCCACTTCT | TATTCCCAT  | TGTAGTTGCT | GGAGCTACAA | TAATTCATCT | CCTATTCCTA  |
| A_interioris_AP0 | TTTCATTTCC | TATTCCCAT  | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTATTCCTC  |
| A_marmorata_AP00 | TTCCACTTCC | TATTCCCAT  | TGTAGTTGCC | GGTGCTACAA | TAATCCACCT | CCTATTCCTC  |
| A_megastoma_AP00 | TTTCACTTCC | TATTCCCAT  | TGTAGTTGCC | GGCGCTACAA | TAATCCACCT | CCTATTCCTT  |

|                  |            |            |            |            |            |             |
|------------------|------------|------------|------------|------------|------------|-------------|
| A_mossambica_AP0 | TTCCACTTCC | TATTTCCATT | CGTAGTCGCC | GGAGCAACAA | TGCTCCATCT | CCTATTCCCTT |
| A_labiata_AP0072 | TTTCACTTCC | TATTCCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTATTTCTC  |
| A_nebulosa_nebul | TTTCACTTCC | TATTCCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTATTTCTC  |
| A_obscura_AP0072 | TTCCATTTCC | TATTCCCATT | TGTAGTTGCT | GGCGCTACAA | TAATTCACCT | CCTATTTCTC  |
| A_reinhardtii_AP | TTCCACTTCC | TATTTCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTATTCCCTT |
| A_rostrata_AP007 | TTCCACTTCC | TATTTCCATT | TGTAGTCGCC | GGGGCCACAA | TGCTTCACCT | CCTATTCCCTC |
| A_anguilla_KJ564 | TTCCACTTCC | TATTTCCATT | TGTAGTTGCT | GGAGCCACAA | TACTTCACCT | CCTATTCCCTC |
| A_bengalensis_be | TTTCACTTCC | TATTCCCATT | TGTAGTTGCC | GGCGCTACAA | TAATTCACCT | CCTATTTCTC  |

|            |            |            |            |            |            |
|------------|------------|------------|------------|------------|------------|
| ....  .... | ....  .... | ....  .... | ....  .... | ....  .... | ....  .... |
| 605        | 615        | 625        | 635        | 645        | 655        |

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| 22eel02_Hap01    | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel10_Hap02    | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | aATCCCATTT |
| 22eel03-04_Hap03 | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel12_Hap04    | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel05-08-09_11 | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel16-17_Hap06 | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel07_Hap07    | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel01_Hap08    | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| 22eel06_Hap09    | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| A_japonica_AB038 | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ACGCAGACAA | GATCCCATTT |
| A_luzonensis_AB4 | CATGAAACAG | GGTCAAACAA | CCCAGTAGGA | TTAAATTCCG | ACGCAGACAA | AATCCCATTT |
| A_australis_aust | CACGAAACTG | GATCTAACAA | CCCAGTAGGA | CTGAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_australis_schm | CACGAAACTG | GATCTAACAA | CCCAGTAGGA | CTGAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_bicolor_bicolo | CACGAAACAG | GATCAAACAA | CCCAGTAGGG | TTAAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_bicolor_pacifi | CACGAAACAG | GATCAAACAA | CCCAGTAGGA | TTAAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_malgumora_AP00 | CACGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_celebesensis_A | CATGAAACAG | GATCGAACAA | CCCAGTAGGA | TTAAACTCTG | ACGCAGACAA | AATCCCATTC |
| A_dieffenbachii_ | CATGAAACAG | GATCAAGCAA | TCCAGTAGGA | TTAAACTCTG | ACGCAGACAA | AGTCCCATTC |
| A_interioris_AP0 | CATGAAACAG | GGTCAAACAA | CCCAGTAGGA | TTAAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_marmorata_AP00 | CATGAAACAG | GGTCAAACAA | CCCAGTAGGA | TTGAACTCCG | ACGCGGACAA | AATTCCATTC |
| A_megastoma_AP00 | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | TTAAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_mossambica_AP0 | CACGAAACAG | GATCAAACAA | TCCAGTAGGA | CTAAATTCTG | ACGCAGACAA | AATCCCATTC |
| A_labiata_AP0072 | CATGAAACAG | GGTCAAACAA | CCCAGTAGGA | TTGAACTCTG | ACGCAGACAA | AATCCCATTC |
| A_nebulosa_nebul | CATGAAACAG | GGTCAAACAA | CCCAGTAGGA | TTGAACTCTG | ACGCAGACAA | AATCCCATTC |
| A_obscura_AP0072 | CACGAGACAG | GATCAAACAA | CCCAGTAGGA | TTAAACTCCG | ACGCAGACAA | AATCCCATTT |
| A_reinhardtii_AP | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | CTGAACTCTG | ATGCAGACAA | AATCCCATTC |
| A_rostrata_AP007 | CATGAAACAG | GATCAAACAA | CCCAGTAGGA | TTAAACTCCG | ACGCAGACAA | AATCCCATTC |
| A_anguilla_KJ564 | CATGAAACAG | GATCAAACAA | CCCGTAGGA  | TTAAACTCCG | ACGCAGACAA | AATCCCATTC |

A\_bengalensis\_be CATGAAACAG GGTCAAACAA CCCAGTAGGA TTGAACTCTG ACGCAGACAA AATCCCATTC

....|....| ....|....| ....|....| ....|....| ....|....| ....|....|

665 675 685 695 705 715

|                  |            |            |            |             |            |            |
|------------------|------------|------------|------------|-------------|------------|------------|
| 22eel02_Hap01    | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel10_Hap02    | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel03-04_Hap03 | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGaTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel12_Hap04    | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel05-08-09_11 | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel16-17_Hap06 | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TtATACTAAC | CGCCCTAACA |
| 22eel07_Hap07    | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel01_Hap08    | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| 22eel06_Hap09    | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| A_japonica_AB038 | CACCCTTATT | TCTCCTACAA | AGACCTACTA | GGGTTTCATTA | TCATACTAAC | CGCCCTAACA |
| A_luzonensis_AB4 | CACCCATACT | TCTCCTACAA | AGACCTACTA | GGGTTTATTA  | TTATACTAAC | CGCCCTAACA |
| A_australis_aust | CACCCATACT | TCTCCTACAA | AGACCTGCTA | GGCTTCATTA  | TTATACTCAC | CGCCCTAACA |
| A_australis_schm | CACCCATACT | TCTCCTACAA | AGACCTGCTA | GGCTTCATTA  | TTATACTCAC | CGCCCTAACA |
| A_bicolor_bicolo | CATCCATACT | TCTCATACAA | AGACCTGTTA | GGATTCATTA  | TTATACTAAC | TGCCCTAACA |
| A_bicolor_pacifi | CATCCATACT | TCTCATACAA | AGACCTATTA | GGATTCATTA  | TTATGCTAAC | TGCCCTAACA |
| A_malgumora_AP00 | CACCCATACT | TCTCCTACAA | AGACCTACTA | GGATTTATTA  | TCATACTCAC | CGCCCTAACG |
| A_celebesensis_A | CACCCATACT | TCTCCTACAA | AGACCTATTA | GGATTCATTA  | TTATACTGAC | CGCCCTAACA |
| A_dieffenbachii_ | CACCCATACT | TCTCCTACAA | AGACCTACTA | GGATTCATTA  | TTATACTCAC | CGCCCTAACA |
| A_interioris_AP0 | CACCCATACT | TCTCCTACAA | AGACCTACTA | GGATTTATTA  | TCATACTAAC | CGCCCTAACA |
| A_marmorata_AP00 | CACCCATACT | TCTCCTACAA | AGACCTGCTA | GGATTCATTA  | TCATACTAAC | CGCCTTAACA |
| A_megastoma_AP00 | CACCCATACT | TCTCCTACAA | AGACCTACTA | GGATTCATCA  | TCATACTAAC | CGCCCTAACA |
| A_mossambica_AP0 | CACCCATACT | TCTCCTACAA | AGACCTTTTA | GGGTTTCATTA | TTATACTCAC | CGCCCTAACA |
| A_labiata_AP0072 | CATCCATACT | TCTCTTACAA | AGACCTACTA | GGATTCATTA  | TTATATTAAC | CGCCCTAACA |
| A_nebulosa_nebul | CATCCATACT | TCTCTTACAA | AGACCTACTA | GGATTCATTA  | TTATATTAAC | CGCCCTAACA |
| A_obscura_AP0072 | CACCCATACT | TCTCATACAA | AGACCTACTA | GGATTCATTA  | TTATACTAAC | CGCCCTAACA |
| A_reinhardtii_AP | CACCCATACT | TCTCCTACAA | AGACCTGCTA | GGATTCATTA  | TTATACTAAC | CGCTTTAACA |
| A_rostrata_AP007 | CACCCATATT | TCTCCTACAA | AGACCTACTA | GGATTCATTA  | TCATGCTCAC | CGCTCTAACA |
| A_anguilla_KJ564 | CACCCATACT | TCTCCTACAA | AGACCTACTG | GGGTTTCATTA | TCATGCTCAC | CGCCCTAACA |
| A_bengalensis_be | CATCCATACT | TCTCTTACAA | AGACCTACTA | GGATTCATTA  | TTATATTAAC | CGCCCTAACA |

....|....| ....|....| ....|....| ....|....

725 735 745 755

|                  |            |            |            |           |
|------------------|------------|------------|------------|-----------|
| 22eel02_Hap01    | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGA+CCA |
| 22eel10_Hap02    | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGA+CCA |
| 22eel03-04_Hap03 | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGA+CCA |



|                  |            |            |            |           |
|------------------|------------|------------|------------|-----------|
| 22eel12_Hap04    | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGACCCA |
| 22eel05_08-09_11 | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGAtCCA |
| 22eel16-17_Hap06 | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGAtCCA |
| 22eel07_Hap07    | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGAtCCA |
| 22eel01_Hap08    | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGAtCCA |
| 22eel06_Hap09    | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGAtCCA |
| A_japonica_AB038 | ATACTTGCCC | TATTCTCCCC | AAACCTCCTT | GGGGATCCA |
| A_luzonensis_AB4 | ATACTTGCTC | TATTCTATCC | AAACCTCCTT | GGAGACCCA |
| A_australis_aust | ATACTTGCCC | TATTTTACCC | AAACCTCCTT | GGAGACCCA |
| A_australis_schm | ATACTTGCCC | TATTTTACCC | AAACCTCCTT | GGAGACCCA |
| A_bicolor_bicolo | ATACTTGCTC | TATTCTACCC | AAACCTTCTT | GGAGACCCA |
| A_bicolor_pacifi | TTACTTGCTC | TATTCTACCC | AAACCTCCTT | GGAGACCCA |
| A_malgumora_AP00 | ATACTTGCCC | TATTTTACCC | AAACCTCCTT | GGAGACCCA |
| A_celebesensis_A | ATACTTGCCC | TATTCTACCC | AAATCTTCTT | GGAGATCCA |
| A_dieffenbachii_ | ATACTTGCCC | TATTTTACCC | AAACCTCCTT | GGAGATCCA |
| A_interioris_AP0 | ATACTTGCTC | TATTCTATCC | AAACCTCCTT | GGAGACCCA |
| A_marmorata_AP00 | ATACTTGCTC | TATTCTACCC | AAACCTCCTT | GGAGACCCA |
| A_megastoma_AP00 | ATACTTGCCC | TATTCTACCC | AAACCTTCTC | GGAGACCCA |
| A_mossambica_AP0 | ATACTCGCCC | TATTCTACCC | AAACCTACTC | GGAGACCCA |
| A_labiata_AP0072 | ATACTTGCTC | TATTTTACCC | AAACCTCCTT | GGAGATCCA |
| A_nebulosa_nebul | ATACTTGCTC | TATTTTACCC | AAACCTCCTT | GGAGATCCA |
| A_obscura_AP0072 | ATACTTGCTC | TATTCTACCC | AAACCTCCTT | GGAGACCCA |
| A_reinhardtii_AP | ATACTTGCCC | TATTCTACCC | AAACCTCCTT | GGAGACCCA |
| A_rostrata_AP007 | ATACTTGCCC | TATTCTACCC | CAACCTGCTT | GGTGATCCA |
| A_anguilla_KJ564 | ATACTTGCCC | TATTCTACCC | GAACCTGCTT | GGAGACCCA |
| A_bengalensis_be | ATACTTGCTC | TATTTTACCC | AAACCTCCTT | GGAGATCCA |