

Supplementary table 1. **Comparison of the results of the tool and published results**

| List of Primers Used | Primer Sequence | Amplified Primers         |                    | Product Size<br>(predicted by the Tool) |
|----------------------|-----------------|---------------------------|--------------------|---|
|                      |                 | Identified In Publication | Identified by Tool |   |
| OPA-01               | CAGGCCCTTC      | OPA-01                    |                    |   |
| OPA-02               | TGCCCAGCTG      | OPA-02                    | OPA-02             |   |
| OPA-03               | AGTCAGCCAC      |                           | OPA-03             | 236                                     |
| OPA-04               | AATCGGGCTG      | OPA-04                    |                    |   |
| OPA-05               | AGGGGTCTTG      |                           | OPA-05             | 394                                     |
| OPA-06               | GGTCCCTGAC      | OPA-06                    |                    |   |
| OPA-07               | GAAACGGGTG      | OPA-07                    |                    |   |
| OPA-08               | GTGACGTAGG      | OPA-08                    | OPA-08             | 1457, 319                               |
| OPA-09               | GGGTAACGCC      | OPA-09                    | OPA-09             |   |
| OPA-10               | GTGATCGCAG      | OPA-10                    | OPA-10             | 697, 260, 887, 703, 220                 |
| OPA-11               | CAATCGCCGT      | OPA-11                    |                    |   |
| OPA-12               | TCGGCGATAG      | OPA-12                    | OPA-12             |   |
| OPA-13               | CAGCACCCAC      | OPA-13                    | OPA-13             | 327, 423, 435                           |
| OPA-14               | TCTGTGCTGG      | OPA-14                    | OPA-14             | 266, 301                                |
| OPA-15               | TTCCGAACCC      | OPA-15                    |                    |   |
| OPA-16               | AGCCAGCGAA      | OPA-16                    | OPA-16             |   |
| OPA-17               | GACCGCTTGT      | OPA-17                    | OPA-17             |   |
| OPA-18               | AGGTGACCGT      | OPA-18                    |                    |   |
| OPA-19               | CAAACGTCCG      | OPA-19                    |                    |   |
| OPA-20               | GTTGCGATCC      | OPA-20                    |                    |   |
|                      |                 |                           |                    |   |
| OPB-01               | GTTTCGCTCC      | OPB-01                    |                    |   |
| OPB-02               | TGATCCCTGG      | OPB-02                    |                    |   |
| OPB-03               | CATCCCCCTG      | OPB-03                    | OPB-03             | 650, 241, 234, 463, 417, 393, 235, 493  |
| OPB-04               | GGA CTGGAGT     |                           | OPB-04             | 209, 326                                |
| OPB-05               | TGCGCCCTTC      | OPB-05                    |                    |   |
| OPB-06               | TGCTCTGCCC      | OPB-06                    | OPB-06             | 457, 245, 253, 1195, 282, 406, 211      |
| OPB-07               | GGTGACGCAG      | OPB-07                    | OPB-07             |   |
| OPB-08               | GTCCACACGG      | OPB-08                    | OPB-08             | 419, 600                                |
| OPB-09               | TGGGGGACTC      | OPB-09                    |                    |   |
| OPB-10               | CTGCTGGGAC      | OPB-10                    | OPB-10             | 200, 486                                |
| OPB-11               | GTAGACCCGT      | OPB-11                    |                    |   |
| OPB-12               | CCTTGACGCA      | OPB-12                    |                    |   |

|        |             |        |        |  |
|--------|-------------|--------|--------|--|
| OPB-13 | TTCCCCCGCT  | OPB-13 | OPB-13 | 356, 237, 453, 235   |
| OPB-14 | TCCGCTCTGG  | OPB-14 | OPB-14 | 336  |
| OPB-15 | GGAGGGTGTT  | OPB-15 | OPB-15 | 241, 493, 420, 211   |
| OPB-16 | TTTGCCCGGA  | OPB-16 | OPB-16 | 235  |
| OPB-17 | AGGGAACGAG  | OPB-17 | OPB-17 | 303  |
| OPB-18 | CCACAGCAGT  | OPB-18 | OPB-18 | 306  |
| OPB-19 | ACCCCCGAAG  | OPB-19 |        |  |
| OPB-20 | GGACCCCTTAC | OPB-20 |        |  |
|        |             |        |        |  |
| OPC-01 | TTCGAGCCAG  | OPC-01 | OPC-01 | 537  |
| OPC-02 | GTGAGGCGTC  |        | OPC-02 | 359  |
| OPC-03 | GGGGGTCTTT  | OPC-03 | OPC-03 |  |
| OPC-04 | CCGCATCTAC  | OPC-04 | OPC-04 | 202  |
| OPC-05 | GATGACCGCC  |        |        |  |
| OPC-06 | GAACGGACTC  | OPC-06 | OPC-06 | 260  |
| OPC-07 | GTCCCGACGA  | OPC-07 |        |  |
| OPC-08 | TGGACCGGTG  | OPC-08 | OPC-08 |  |
| OPC-09 | CTCACCGTCC  | OPC-09 | OPC-09 |  |
| OPC-10 | TGTCTGGGTG  | OPC-10 | OPC-10 | 402  |
| OPC-11 | AAAGCTGCGG  | OPC-11 | OPC-11 | 521  |
| OPC-12 | TGTCATCCCC  |        | OPC-12 |  |
| OPC-13 | AAGCCTCGTC  |        |        |  |
| OPC-14 | TGCGTGCTTG  | OPC-14 | OPC-14 | 661  |
| OPC-15 | GACGGATCAG  |        | OPC-15 | 307, 300   |
| OPC-16 | CACACTCCAG  | OPC-16 | OPC-16 | 559, 741, 715, 248,<br>1617  |
|        |             |        |        | 384, 387, 239, 263,<br>341, 331, 281, 200,<br>353, 692, 376, 338,<br>433, 399, 264, 599,<br>246, 240, 272, 203,<br>298, 418, 321, 242, |
| OPC-17 | TTCCCCCAG   | OPC-17 | OPC-17 |  |
| OPC-18 | TGAGTGGGTG  |        | OPC-18 |  |
| OPC-19 | GTTGCCAGCC  |        | OPC-19 | 403  |
| OPC-20 | ACTTCGCCAC  |        | OPC-20 |  |
|        |             |        |        |  |
| OPD-01 | ACCGCGAAGG  | OPD-01 | OPD-01 |  |
| OPD-02 | GGACCCAACC  |        | OPD-02 | 283, 534   |
| OPD-03 | GTCGCCGTCA  | OPD-03 | OPD-03 | 267  |
| OPD-04 | TCTGGTGAGG  | OPD-04 | OPD-04 | 429, 235, 430  |

|        |            |        |        |  |
|--------|------------|--------|--------|--|
| OPD-05 | TGAGCGGACA | OPD-05 |        |  |
| OPD-06 | ACCTGAACGG | OPD-06 | OPD-06 |  |
| OPD-07 | TTGGCACGGG | OPD-07 |        |  |
| OPD-08 | GTGTGCCCCA |        | OPD-08 |  |
| OPD-09 | CTCTGGAGAC | OPD-09 | OPD-09 | 471, 299   |
| OPD-10 | GGTCTACACC | OPD-10 | OPD-10 |  |
| OPD-11 | AGCGCCATTG | OPD-11 |        |  |
| OPD-12 | CACCGTATCC | OPD-12 | OPD-12 |  |
| OPD-13 | GGGGTGACGA |        |        |  |
| OPD-14 | CTTCCCCAAG |        | OPD-14 | 468, 245, 258  |
| OPD-15 | CATCCGTGCT | OPD-15 | OPD-15 | 408  |
| OPD-16 | AGGGCGTAAG | OPD-16 |        |  |
| OPD-17 | TTTCCCACGG |        | OPD-17 | 269, 546   |
| OPD-18 | GAGAGCCAAC |        | OPD-18 |  |
| OPD-19 | CTGGGGACTT |        |        |  |
| OPD-20 | ACCCGGTCAC | OPD-20 |        |  |
|        |            |        |        |  |
| OPE-01 | CCCAAGGTCC | OPE-01 | OPE-01 |  |
| OPE-02 | GGTGCGGGAA | OPE-02 | OPE-02 |  |
| OPE-03 | CCAGATGCAC | OPE-03 | OPE-03 | 404  |
| OPE-04 | GTGACATGCC | OPE-04 | OPE-04 | 252, 1128  |
| OPE-05 | TCAGGGAGGT | OPE-05 |        |  |
| OPE-06 | AAGACCCCTC | OPE-06 | OPE-06 |  |
|        |            |        |        |  |
| OPE-07 | AGATGCAGCC |        | OPE-07 | 403, 371, 206, 241,<br>597, 314, 442, 386,<br>469, 255, 781, |
| OPE-08 | TCACCACGGT | OPE-08 |        |  |
| OPE-09 | CTTACCCCGA | OPE-09 | OPE-09 | 350, 355   |
| OPE-10 | CACCAGGTGA | OPE-10 | OPE-10 | 315, 397   |
| OPE-11 | GAGTCTCAGG | OPE-11 | OPE-11 |  |
| OPE-12 | TTATCGCCCC | OPE-12 |        |  |
| OPE-13 | CCCGATTGCG | OPE-13 | OPE-13 | 663  |
| OPE-14 | TGCGGCTGAG | OPE-14 | OPE-14 | 587  |
| OPE-15 | ACGCACAACC | OPE-15 | OPE-15 | 231, 291, 1419   |
| OPE-16 | GGTGACTGTG | OPE-16 |        |  |
| OPE-17 | CTACTGCCGT | OPE-17 | OPE-17 | 1067   |
| OPE-18 | GGACTGCAGA | OPE-18 | OPE-18 | 437, 440, 436, 385   |
| OPE-19 | ACGGCGTATG | OPE-19 |        |  |
| OPE-20 | AACGGTGACC | OPE-20 | OPE-20 | 242  |
|        |            |        |        |  |

|        |             |        |        |   |
|--------|-------------|--------|--------|---|
| OPF-01 | ACGGATCCTG  |        |        |   |
| OPF-02 | GAGGATCCCT  |        | OPF-02 |   |
| OPF-03 | CCTGATCACC  |        | OPF-03 | 482, 310, 463, 224, 235                     |
| OPF-04 | GGTGATCAGG  | OPF-04 | OPF-04 | 271, 434, 508                               |
| OPF-05 | CCGAATTCCC  | OPF-05 | OPF-05 | 530, 393                                    |
| OPF-06 | GGGAATTCGG  | OPF-06 | OPF-06 | 237, 351, 235, 451                          |
| OPF-07 | CCGATATCCC  | OPF-07 | OPF-07 |   |
| OPF-08 | GGGATATCGG  | OPF-08 | OPF-08 |   |
| OPF-09 | CCAAGCTTCC  | OPF-09 | OPF-09 | 319, 379                                    |
| OPF-10 | GGAAGCTTGG  | OPF-10 | OPF-10 | 510, 607, 658                               |
| OPF-11 | TTGGTACCCC  | OPF-11 | OPF-11 | 1307  |
| OPF-12 | ACGGTACCAG  | OPF-12 |        |   |
| OPF-13 | GGCTGCAGAA  | OPF-13 | OPF-13 | 340, 305, 223, 430                          |
| OPF-14 | TGCTGCAGGT  | OPF-14 | OPF-14 | 310, 280, 346, 401, 212, 319, 201, 321, 634 |
| OPF-15 | CCAGTACTCC  | OPF-15 | OPF-15 |   |
| OPF-16 | GGAGTACTGG  | OPF-16 | OPF-16 | 316   |
| OPF-17 | AACCCGGGAA  | OPF-17 | OPF-17 | 237, 334, 498, 310, 282, 230                |
| OPF-18 | TTCCCGGGTT  | OPF-18 | OPF-18 |   |
| OPF-19 | CCTCTAGACC  | OPF-19 | OPF-19 | 612   |
| OPF-20 | GGTCTAGAGG  | OPF-20 |        |   |
|        |             |        |        |   |
| OPG-01 | CTACGGAGGA  |        |        |   |
| OPG-02 | GGCACTGAGG  |        | OPG-02 | 223   |
| OPG-03 | GAGCCCTCCA  |        | OPG-03 |   |
| OPG-04 | AGCGTGCTCTG | OPG-04 | OPG-04 | 353   |
| OPG-05 | CTGAGACGGA  | OPG-05 |        |   |
| OPG-06 | GTGCCTAACC  | OPG-06 | OPG-06 | 403, 369                                    |
| OPG-07 | GAACCTGCGG  |        |        |   |
| OPG-08 | TCACGTCCAC  | OPG-08 |        |   |
| OPG-09 | CTGACGTCAC  | OPG-09 |        |   |
| OPG-10 | AGGGCCGTCT  | OPG-10 |        |   |
| OPG-11 | TGCCCCGTCTG | OPG-11 | OPG-11 | 307   |
| OPG-12 | CAGCTCACGA  | OPG-12 | OPG-12 |   |
| OPG-13 | CTCTCCGCCA  | OPG-13 | OPG-13 | 515   |
| OPG-14 | GGATGAGACC  | OPG-14 | OPG-14 | 694, 1062, 530                              |
| OPG-15 | ACTGGGACTC  | OPG-15 |        |   |

|        |            |        |        |   |
|--------|------------|--------|--------|---|
| OPG-16 | AGCGTCCTCC | OPG-16 |        |   |
| OPG-17 | ACGACCGACA |        |        |   |
| OPG-18 | GGCTCATGTG | OPG-18 | OPG-18 | 408, 264, 407, 410  |
| OPG-19 | GTCAGGGCAA | OPG-19 |        |   |
| OPG-20 | TCTCCCTCAG | OPG-20 | OPG-20 | 333, 563, 675, 328,<br>330, 374, 497, 230,<br>420, 327, 1664,<br>409, 284, 508  |
|        |            |        |        |   |
| OPI-01 | ACCTGGACAC |        |        |   |
| OPI-02 | GGAGGAGAGG |        | OPI-02 | 204, 241, 460, 264,<br>222, 297, 587, 240,<br>280, 471, 381, 268,<br>220, 277, 584, 239,<br>287, 208, 266, 205,<br>212, 214, 235, 238,<br>476, 211, 367, 408,<br>431, 296, 311, 768 |
| OPI-03 | CAGAAGCCCA |        | OPI-03 | 315, 266  |
| OPI-04 | CCGCCTAGTC |        |        |   |
| OPI-05 | TGTTCCACGG | OPI-05 |        |   |
| OPI-06 | AAGGCGGCAG |        | OPI-06 | 504   |
| OPI-07 | CAGCGACAAG |        | OPI-07 | 856, 394  |
| OPI-08 | TTTGCCCGGT | OPI-08 | OPI-08 | 235   |
| OPI-09 | TGGAGAGCAG |        | OPI-09 | 291, 283, 433   |
| OPI-10 | ACAACGCGAG | OPI-10 | OPI-10 | 648   |
| OPI-11 | ACATGCCGTG |        | OPI-11 |   |
| OPI-12 | AGAGGGCACA |        | OPI-12 | 274, 463, 459   |
| OPI-13 | CTGGGGCTGA |        | OPI-13 | 324   |
| OPI-14 | TGACGGCGGT |        | OPI-14 | 206   |
| OPI-15 | TCATCCGAGG | OPI-15 |        |   |
| OPI-16 | TCTCCGCCCT |        | OPI-16 | 271, 643, 605, 204,<br>298, 406, 211, 351,<br>574   |
| OPI-17 | GGTGGTGATG |        | OPI-17 | 356, 367, 1522,<br>286, 289, 228, 433,<br>250, 287, 325   |
| OPI-18 | TGCCCAGCCT |        |        |   |
| OPI-19 | AATGCGGGAG | OPI-19 |        |   |
| OPI-20 | AAAGTGCGGG |        |        |   |
|        |            |        |        |   |

|        |             |        |        |               |
|--------|-------------|--------|--------|---------------|
| OPJ-01 | CCCGGCATAA  |        |        |               |
| OPJ-02 | CCCGTTGGGA  |        |        |               |
| OPJ-03 | TCTCCGCTTG  | OPJ-03 | OPJ-03 |               |
| OPJ-04 | CCGAACACGG  | OPJ-04 | OPJ-04 |               |
| OPJ-05 | CTCCATGGGG  |        | OPJ-05 | 295, 762      |
| OPJ-06 | TCGTTCCGCA  | OPJ-06 |        |               |
| OPJ-07 | CCTCTCGACA  |        | OPJ-07 | 496           |
| OPJ-08 | CATACCGTGG  | OPJ-08 | OPJ-08 | 1133          |
| OPJ-09 | TGAGCCTCAC  |        | OPJ-09 | 235           |
| OPJ-10 | AAGCCCCGAGG |        | OPJ-10 |               |
| OPJ-11 | ACTCCTGCGA  |        | OPJ-11 | 326, 1100     |
| OPJ-12 | GTCCCGTGGT  | OPJ-12 |        |               |
| OPJ-13 | CCACACTACC  |        | OPJ-13 | 1400          |
| OPJ-14 | CACCCGGATG  |        | OPJ-14 |               |
| OPJ-15 | TGTAGCAGGG  | OPJ-15 | OPJ-15 | 228, 340      |
| OPJ-16 | CTGCTTAGGG  |        | OPJ-16 |               |
| OPJ-17 | ACGCCAGTTC  |        |        |               |
| OPJ-18 | TGGTCGCAGA  |        | OPJ-18 | 463, 235      |
| OPJ-19 | GGACACCACT  |        | OPJ-19 |               |
| OPJ-20 | AAGCGGCCTC  |        |        |               |
|        |             |        |        |               |
| OPK-01 | CATTCGAGCC  | OPK-01 |        |               |
| OPK-02 | GTCTCCGCAA  |        | OPK-02 | 620, 235      |
| OPK-03 | CCAGCTTAGG  | OPK-03 | OPK-03 | 340           |
| OPK-04 | CCGCCCAAAC  |        | OPK-04 | 241, 297      |
| OPK-05 | TCTGTGAGG   | OPK-05 |        |               |
| OPK-06 | CACCTTTCCC  | OPK-06 | OPK-06 |               |
| OPK-07 | AGCGAGCAAG  |        | OPK-07 |               |
| OPK-08 | GAACACTGGG  | OPK-08 |        |               |
| OPK-09 | CCCTACCGAC  | OPK-09 | OPK-09 |               |
| OPK-10 | GTGCAACGTG  | OPK-10 |        |               |
| OPK-11 | AATGCCCCAG  |        | OPK-11 |               |
| OPK-12 | TGGCCCTCAC  |        |        |               |
| OPK-13 | GGTTGTACCC  | OPK-13 |        |               |
| OPK-14 | CCCGCTACAC  | OPK-14 |        |               |
| OPK-15 | CTCCTGCCAA  |        | OPK-15 | 249, 313      |
| OPK-16 | GAGCGTCGAA  | OPK-16 | OPK-16 | 519, 470      |
| OPK-17 | CCCAGCTGTG  | OPK-17 | OPK-17 | 446, 369, 491 |
| OPK-18 | CCTAGTCGAG  | OPK-18 |        |               |
| OPK-19 | CACAGGCGGA  |        | OPK-19 | 251           |

|        |            |        |        |                              |
|--------|------------|--------|--------|------------------------------|
| OPK-20 | GTGTCGCGAG | OPK-20 | OPK-20 | 558                          |
|        |            |        |        |                              |
| OPL-01 | GGCATGACCT |        |        |                              |
| OPL-02 | TGGGCGTCAA |        | OPL-02 |                              |
| OPL-03 | CCAGCAGCTT |        | OPL-03 | 234, 347, 268, 235, 609      |
| OPL-04 | GACTGCACAC | OPL-04 | OPL-04 | 943, 1390, 616               |
| OPL-05 | ACGCAGGCAC |        | OPL-05 |                              |
| OPL-06 | GAGGGAAGAG | OPL-06 | OPL-06 | 594, 223                     |
| OPL-07 | AGGCGGGAAC |        | OPL-07 | 372                          |
| OPL-08 | AGCAGGTGGA |        | OPL-08 | 245                          |
| OPL-09 | TGCGAGAGTC | OPL-09 | OPL-09 | 598, 247                     |
| OPL-10 | TGGGAGATGG |        | OPL-10 | 261, 570, 508                |
| OPL-11 | ACGATGAGCC |        | OPL-11 | 1902, 938, 1908, 704         |
| OPL-12 | GGGCGGTACT | OPL-12 |        |                              |
| OPL-13 | ACCGCCTGCT | OPL-13 | OPL-13 | 757                          |
| OPL-14 | GTGACAGGCT |        |        |                              |
| OPL-15 | AAGAGAGGGG |        | OPL-15 | 427, 567, 342, 500, 266, 343 |
| OPL-16 | AGGTTGCAGG | OPL-16 | OPL-16 | 643                          |
| OPL-17 | AGCCTGAGCC | OPL-17 |        |                              |
| OPL-18 | ACCACCCACC | OPL-18 | OPL-18 | 205, 312, 295, 509, 270, 223 |
| OPL-19 | GAGTGGTGAC |        | OPL-19 | 890, 870, 504, 223           |
| OPL-20 | TGGTGGACCA | OPL-20 | OPL-20 | 302, 235                     |
|        |            |        |        |                              |
| OPM-01 | GTTGGTGGCT |        | OPM-01 | 466, 304, 532, 202           |
| OPM-02 | ACAACGCCTC | OPM-02 | OPM-02 | 244                          |
| OPM-03 | GGGGGATGAG | OPM-03 | OPM-03 | 277                          |
| OPM-04 | GGCGGTTGTC |        | OPM-04 |                              |
| OPM-05 | GGGAACGTGT |        | OPM-05 | 303, 222                     |
| OPM-06 | CTGGGCAACT | OPM-06 |        |                              |
| OPM-07 | CCGTGACTCA | OPM-07 |        |                              |
| OPM-08 | TCTGTTCCCC |        | OPM-08 |                              |
| OPM-09 | GTCTTGCGGA | OPM-09 | OPM-09 | 492                          |
| OPM-10 | TCTGGCGCAC | OPM-10 |        |                              |
| OPM-11 | GTCCACTGTG | OPM-11 | OPM-11 | 419                          |
| OPM-12 | GGGACGTTGG |        |        |                              |
| OPM-13 | GGTGGTCAAG | OPM-13 | OPM-13 | 289                          |

|        |            |        |        |  |
|--------|------------|--------|--------|--|
| OPM-14 | AGGGTCGTTC | OPM-14 |        |  |
| OPM-15 | GACCTACCAC | OPM-15 |        |  |
| OPM-16 | GTAACCAGCC | OPM-16 | OPM-16 |  |
| OPM-17 | TCAGTCCGGG |        |        |  |
| OPM-18 | CACCATCCGT |        | OPM-18 | 272, 268, 336  |
| OPM-19 | CCTTCAGGCA | OPM-19 | OPM-19 |  |
| OPM-20 | AGGTCTTGGG |        | OPM-20 | 245  |
|        |            |        |        |  |
| OPN-01 | CTCACGTTGG | OPN-01 | OPN-01 |  |
| OPN-02 | ACCAGGGGCA | OPN-02 | OPN-02 |  |
| OPN-03 | GGTACTCCCC | OPN-03 |        |  |
| OPN-04 | GACCGACCCA |        | OPN-04 |  |
| OPN-05 | ACTGAACGCC |        | OPN-05 |  |
| OPN-06 | GAGACGCACA |        | OPN-06 | 957, 594, 236  |
| OPN-07 | CAGCCCAGAG | OPN-07 | OPN-07 |  |
| OPN-08 | ACCTCAGCTC |        | OPN-08 | 252, 902, 330, 366,<br>250, 262  |
| OPN-09 | TGCCGGCTTG |        | OPN-09 |  |
| OPN-10 | ACAAGTGGGG | OPN-10 | OPN-10 | 395  |
| OPN-11 | TCGCCGCAAA | OPN-11 | OPN-11 | 283  |
| OPN-12 | CACAGACACC | OPN-12 | OPN-12 | 206, 241, 676, 307,<br>322, 681, 802, 278,<br>899, 530, 444, 522,<br>927 |
| OPN-13 | AGCGTCACTC | OPN-13 | OPN-13 | 233  |
| OPN-14 | TCGTGCGGGT | OPN-14 |        |  |
| OPN-15 | CAGCGACTGT | OPN-15 |        |  |
| OPN-16 | AAGCGACCTG |        |        |  |
| OPN-17 | CATTGGGGAG |        |        |  |
| OPN-18 | GGTGAGGTCA |        |        |  |
| OPN-19 | GTCCGTACTG | OPN-19 |        |  |
| OPN-20 | GGTGCTCCGT | OPN-20 | OPN-20 | 238, 237, 413, 236   |
|        |            |        |        |  |
| OPP-01 | GTAGCACTCC |        | OPP-01 |  |
| OPP-02 | TCGGCAGCA  | OPP-02 | OPP-02 |  |
| OPP-03 | CTGATACGCC |        | OPP-03 | 230, 235, 520  |
| OPP-04 | GTGTCTCAGG |        | OPP-04 | 436  |
| OPP-05 | CCCCGGTAAC | OPP-05 | OPP-05 |  |
| OPP-06 | GTGGGCTGAC | OPP-06 | OPP-06 |  |
| OPP-07 | GTCCATGCCA |        |        |  |



|        |             |        |        |                                 |
|--------|-------------|--------|--------|---------------------------------|
| OPP-08 | ACATCGCCCA  | OPP-08 |        |                                 |
| OPP-09 | GTGGTCCGCA  | OPP-09 | OPP-09 | 517                             |
| OPP-10 | TCCCGCCTAC  | OPP-10 | OPP-10 |                                 |
| OPP-11 | AACGCGTCGG  | OPP-11 |        |                                 |
| OPP-12 | AAGGGCGAGT  | OPP-12 | OPP-12 |                                 |
| OPP-13 | GGAGTGCCTC  |        | OPP-13 | 254, 636, 379, 378,<br>301      |
| OPP-14 | CCAGCCGAAC  |        | OPP-14 | 1265                            |
| OPP-15 | GGAAGCCAAC  |        | OPP-15 | 417                             |
| OPP-16 | CCAAGCTGCC  |        | OPP-16 |                                 |
| OPP-17 | TGACCCGCCT  | OPP-17 |        |                                 |
| OPP-18 | GGCTTGGCCT  | OPP-18 |        |                                 |
| OPP-19 | GGGAAGGACA  |        | OPP-19 | 514, 223, 222                   |
| OPP-20 | GACCCTAGTC  | OPP-20 | OPP-20 | 443                             |
|        |             |        |        |                                 |
| OPQ-01 | GGGACGATGG  |        | OPQ-01 | 1533                            |
| OPQ-02 | TCTGTCCGGTC |        | OPQ-02 | 500                             |
| OPQ-03 | GGTCACCTCA  |        |        |                                 |
| OPQ-04 | AGTGCGCTGA  | OPQ-04 |        |                                 |
| OPQ-05 | CCGCGTCTTG  | OPQ-05 | OPQ-05 |                                 |
| OPQ-06 | GAGCGCCTTG  | OPQ-06 |        |                                 |
| OPQ-07 | CCCCGATGGT  |        | OPQ-07 |                                 |
| OPQ-08 | CTCCAGCGGA  | OPQ-08 | OPQ-08 | 201                             |
| OPQ-09 | GGCTAACCGA  | OPQ-09 | OPQ-09 |                                 |
| OPQ-10 | TGTGCCCCGAA | OPQ-10 |        |                                 |
| OPQ-11 | TCTCCGCAAC  | OPQ-11 |        |                                 |
| OPQ-12 | AGTAGGGCAC  | OPQ-12 |        |                                 |
| OPQ-13 | GGAGTGGACA  | OPQ-13 | OPQ-13 | 291, 292                        |
| OPQ-14 | GGACGCTTCA  | OPQ-14 |        |                                 |
| OPQ-15 | GGGTAACGTG  | OPQ-15 | OPQ-15 |                                 |
| OPQ-16 | AGTGCAGCCA  |        | OPQ-16 | 357                             |
| OPQ-17 | GAAGCCCTTG  | OPQ-17 | OPQ-17 | 308, 265                        |
| OPQ-18 | AGGCTGGGTG  |        | OPQ-18 | 219, 372                        |
| OPQ-19 | CCCCCTATCA  | OPQ-19 | OPQ-19 | 549                             |
| OPQ-20 | TCGCCCAGTC  | OPQ-20 | OPQ-20 | 378                             |
|        |             |        |        |                                 |
| OPR-01 | TGCGGGTCCT  | OPR-01 |        |                                 |
| OPR-02 | CACAGCTGCC  |        | OPR-02 | 1188                            |
| OPR-03 | ACACAGAGGG  | OPR-03 | OPR-03 | 772, 240, 805, 401,<br>420, 300 |

|        |            |        |        |  |
|--------|------------|--------|--------|--|
| OPR-04 | CCCGTAGCAC | OPR-04 | OPR-04 |  |
| OPR-05 | GACCTAGTGG | OPR-05 |        |  |
| OPR-06 | GTCTACGGCA | OPR-06 |        |  |
| OPR-07 | ACTGGCCTGA | OPR-07 | OPR-07 | 201  |
| OPR-08 | CCCGTTGCCT |        |        |  |
| OPR-09 | TGAGCACGAG | OPR-09 | OPR-09 | 1292   |
| OPR-10 | CCATTCCCCA | OPR-10 | OPR-10 | 533, 255   |
| OPR-11 | GTAGCCGTCT | OPR-11 |        |  |
| OPR-12 | ACAGGTGCGT | OPR-12 |        |  |
| OPR-13 | GGACGACAAG | OPR-13 | OPR-13 |  |
| OPR-14 | CAGGATTCCC | OPR-14 | OPR-14 |  |
| OPR-15 | GGACAACGAG | OPR-15 | OPR-15 |  |
| OPR-16 | CTCTGCGCGT | OPR-16 | OPR-16 | 251, 412, 1257   |
| OPR-17 | CCGTACGTAG | OPR-17 | OPR-17 | 396  |
| OPR-18 | GGCTTTGCCA |        |        |  |
| OPR-19 | CCTCCTCATC | OPR-19 | OPR-19 | 391, 240, 412, 775,<br>206, 241, 589, 406,<br>450, 560, 711, 477 |
| OPR-20 | ACGGCAAGGA |        | OPR-20 | 215, 320   |
|        |            |        |        |  |
| OPS-01 | CTACTGCGCT | OPS-01 | OPS-01 | 701, 952, 816  |
| OPS-02 | CCTCTGACTG | OPS-02 | OPS-02 | 330  |
| OPS-03 | CAGAGGTCCC |        | OPS-03 | 282  |
| OPS-04 | CACCCCCTTG | OPS-04 | OPS-04 | 272, 394   |
| OPS-05 | TTTGGGGCCT | OPS-05 | OPS-05 |  |
| OPS-06 | GATACCTCGG | OPS-06 |        |  |
| OPS-07 | TCCGATGCTG |        | OPS-07 | 604  |
| OPS-08 | TTCAGGGTGG |        |        |  |
| OPS-09 | TCCTGGTCCC |        | OPS-09 |  |
| OPS-10 | ACCGTTCCAG | OPS-10 |        |  |
| OPS-11 | AGTCGGGTGG |        |        |  |
| OPS-12 | CTGGGTGAGT |        |        |  |
| OPS-13 | GTCGTTCTTG | OPS-13 |        |  |
| OPS-14 | AAAGGGGTCC | OPS-14 | OPS-14 | 460  |
| OPS-15 | CAGTTCACGG | OPS-15 |        |  |
| OPS-16 | AGGGGGTTCC |        | OPS-16 |  |
| OPS-17 | TGGGGACCAC |        |        |  |
| OPS-18 | CTGGCGAACT |        |        |  |
| OPS-19 | GAGTCAGCAG |        |        |  |
| OPS-20 | TCTGGACGGA |        | OPS-20 |  |

|        |            |        |        |   |
|--------|------------|--------|--------|---|
|        |            |        |        |   |
| OPX-01 | CTGGGCACGA |        | OPX-01 | 200   |
| OPX-02 | TTCCGCCACC |        | OPX-02 |   |
| OPX-03 | TGGCGCAGTG | OPX-03 |        |   |
| OPX-04 | CCGCTACCGA | OPX-04 | OPX-04 |   |
| OPX-05 | CCTTTCCTC  | OPX-05 | OPX-05 | 384, 217, 309, 460,<br>445, 474, 278, 380,<br>223 |
| OPX-06 | ACGCCAGAGG | OPX-06 | OPX-06 |   |
| OPX-07 | GAGCGAGGCT |        | OPX-07 | 772, 363, 297                                     |
| OPX-08 | CAGGGGTGGA |        | OPX-08 | 304, 236  |
| OPX-09 | GGTCTGGTTG |        | OPX-09 |   |
| OPX-10 | CCCTAGACTG | OPX-10 |        |   |
| OPX-11 | GGAGCCTCAG |        | OPX-11 | 321, 227, 235                                     |
| OPX-12 | TCGCCAGCCA |        | OPX-12 | 336   |
| OPX-13 | ACGGGAGCAA |        | OPX-13 |   |
| OPX-14 | ACAGGTGCTG |        |        |   |
| OPX-15 | CAGACAAGCC |        |        |   |
| OPX-16 | CTCTGTTCGG | OPX-16 | OPX-16 | 251, 332  |
| OPX-17 | GACACGGACC |        | OPX-17 |   |
| OPX-18 | GACTAGGTGG | OPX-18 |        |   |
| OPX-19 | TGGCAAGGCA |        | OPX-19 | 689, 486  |
| OPX-20 | CCCAGCTAGA | OPX-20 | OPX-20 |   |
|        |            |        |        |   |
| OPY-01 | GTGGCATCTC |        | OPY-01 |   |
| OPY-02 | CATCGCCGCA | OPY-02 | OPY-02 | 259, 211  |
| OPY-03 | ACAGCCTGCT | OPY-03 |        |   |
| OPY-04 | GGCTGCAATG | OPY-04 | OPY-04 | 291, 703  |
| OPY-05 | GGCTGCGACA | OPY-05 | OPY-05 | 660, 475  |
| OPY-06 | AAGGCTCACC | OPY-06 |        |   |
| OPY-07 | AGAGCCGTCA | OPY-07 | OPY-07 | 546   |
| OPY-08 | AGGCAGAGCA | OPY-08 | OPY-08 |   |
| OPY-09 | AGCAGCGCAC | OPY-09 | OPY-09 | 235   |
| OPY-10 | CAAACGTGGG | OPY-10 |        |   |
| OPY-11 | AGACGATGGG |        | OPY-11 | 612   |
| OPY-12 | AAGCCTGCGA |        | OPY-12 | 237, 423  |
| OPY-13 | GGGTCTCGGT |        |        |   |
| OPY-14 | GGTCGATCTG |        | OPY-14 |   |
| OPY-15 | AGTCGCCCTT | OPY-15 | OPY-15 | 359   |
| OPY-16 | GGGCCAATGT | OPY-16 |        |   |

|                        |            |        |        |                         |
|------------------------|------------|--------|--------|-------------------------|
| OPY-17                 | GACGTGGTGA | OPY-17 | OPY-17 |                         |
| OPY-18                 | GTGGAGTCAG |        | OPY-18 | 235                     |
| OPY-19                 | TGAGGGTCCC |        | OPY-19 | 203, 235                |
| OPY-20                 | AGCCGTGGAA |        |        |                         |
|                        |            |        |        |                         |
| OPZ-01                 | TCTGTGCCAC | OPZ-01 | OPZ-01 |                         |
| OPZ-02                 | CCTACGGGGA |        | OPZ-02 |                         |
| OPZ-03                 | CAGCACCGCA | OPZ-03 | OPZ-03 | 204                     |
| OPZ-04                 | AGGCTGTGCT | OPZ-04 | OPZ-04 | 373, 200, 286, 253      |
| OPZ-05                 | TCCCATGCTG | OPZ-05 | OPZ-05 | 406                     |
| OPZ-06                 | GTGCCGTTCA | OPZ-06 | OPZ-06 |                         |
| OPZ-07                 | CCAGGAGGAC | OPZ-07 | OPZ-07 | 516, 253, 250           |
| OPZ-08                 | GGGTGGGTAA | OPZ-08 |        |                         |
| OPZ-09                 | CACCCCAGTC |        | OPZ-09 |                         |
| OPZ-10                 | CCGACAAACC | OPZ-10 |        |                         |
| OPZ-11                 | CTCAGTCGCA | OPZ-11 |        |                         |
| OPZ-12                 | TCAACGGGAC | OPZ-12 | OPZ-12 |                         |
| OPZ-13                 | GACTAAGCCC | OPZ-13 |        |                         |
| OPZ-14                 | TCGGAGGTTC | OPZ-14 | OPZ-14 |                         |
| OPZ-15                 | CAGGGCTTTC | OPZ-15 |        |                         |
| OPZ-16                 | TCCCCATCAC | OPZ-16 | OPZ-16 | 315, 657, 418, 220, 417 |
| OPZ-17                 | CCTTCCCACT | OPZ-17 | OPZ-17 | 330, 300                |
| OPZ-18                 | AGGGTCTGTG | OPZ-18 | OPZ-18 |                         |
| OPZ-19                 | GTGCGAGCAA | OPZ-19 | OPZ-19 | 321                     |
| OPZ-20                 | ACTTTGGCGG | OPZ-20 | OPZ-20 | 470, 241, 239, 235      |
|                        |            |        |        |                         |
| Total number sequences |            |        |        |                         |
| 400                    |            | 258    | 271    |                         |

Table S2. Sequences of iSCAR Primers for oil palm

| No. | Sequence ID | Primer Name  | Product Size | Forward Primer        | Reverse Primer        |
|-----|-------------|--------------|--------------|-----------------------|-----------------------|
| 1)  | >CN599373   | [OPM-01]304  |              | [GTTGGTGGAGGTGATGAT]  | [CCACCAACAGCANNGAAG]  |
| 2)  | >CN599454   | [OPI-16] 351 |              | [TCTCCGCCAGCCGCACCT]  | [GGCGGAGATGCCGAAAGA]  |
| 3)  | >CN599553   | [OPN-08]366  |              | [ACCTCAGCATCAGCTGCT]  | [AGCTGAGGTCGATAGGAAT] |
| 4)  | >CN600042   | [OPJ-18] 235 |              | [TGGTCGCACACTGGCTGA]  | [TGCGACCATCCNCAAGTT]  |
| 5)  | >CN600095   | [OPD-17] 269 |              | [TTTCCACACATAATAAC]   | [GTGGGAAAAAGGTCCCCA]  |
| 6)  | >CN600235   | [OPL-03] 235 |              | [CCAGCAGCGTCTGATCTT]  | [GCTGCTGGTCCNNNGGAA]  |
| 7)  | >CN600372   | [OPP-19] 222 |              | [GGGAAGGATTACGGCAGA]  | [TCCTTCCCCATGAAGTAT]  |
| 8)  | >CN600396   | [OPF-14] 401 |              | [TGCTGCAGCCACCGCTCC]  | [CCTGCAGCANNGAGCATGG] |
| 9)  | >CN600609   | [OPD-02] 283 |              | [GGACCCAATGTTTCGAGTT] | [TTGGGTCCATCTCTGCAC]  |
| 10) | >CN600851   | [OPQ-18] 219 |              | [AGGCTGGGGAAGGCAACA]  | [CCCAGCCTGAAGTAAGGG]  |
| 11) | >CN601059   | [OPY-02] 211 |              | [CATCGCCGAGATCGTCTC]  | [CGGCGATGCCGGAGGCGG]  |
| 12) | >CN601253   | [OPB-15] 211 |              | [GGAGGGTGGCCGGCACTC]  | [CACCTCCNNGATGGCAA]   |
| 13) | >CN601454   | [OPD-14] 258 |              | [CTTCCCCAATAGAAGTTGT] | [TGGGGAAGAAGAGCGGAA]  |
| 14) | >CN601772   | [OPP-13] 301 |              | [GGAGTGCCGGGAGAGCCG]  | [GGCACTCCCGCTTGCTCT]  |
| 15) | >DW247851   | [OPN-08]366  |              | [ACCTCAGCATCAGCTGCT]  | [AGCTGAGGTCGATAGGAAT] |
| 16) | >DW247968   | [OPL-15] 343 |              | [AAGAGAGGATGAGCATGC]  | [CCTCTCTTCGAGCTCTGT]  |
| 17) | >DW248174   | [OPF-14] 201 |              | [TGCTGCAGTTCACACGTT]  | [CTGCAGCAGGGAGGATCA]  |
| 18) | >DW248218   | [OPN-08]366  |              | [ACCTCAGCATCAGCTGCT]  | [AGCTGAGGTCGATAGGAAT] |
| 19) | >DW248238   | [OPN-08]262  |              | [ACCTCAGCAGCTACAGTC]  | [GCTGAGGTAAGGTCTTAA]  |
| 20) | >DW248263   | [OPG-20] 330 |              | [TCTCCCTCCTCCTCTCC]   | [GAGGGAGAGCTGCAGTAC]  |
| 21) | >DW248319   | [OPI-02] 296 |              | [GGAGGAGATGTACGCGGA]  | [TCTCCTCCAGATATAATG]  |
| 22) | >DW248359   | [OPF-14] 201 |              | [TGCTGCAGTTCACACGTT]  | [CTGCAGCAGGGAGGATCA]  |
| 23) | >DW248473   | [OPI-02] 296 |              | [GGAGGAGATGTACGCGGA]  | [TCTCCTCCAGATATAATG]  |
| 24) | >DW248528   | [OPE-18] 436 |              | [GGACTGCATGGTCATTTG]  | [TGCAGTCCCACCAGATCC]  |
| 25) | >DW248694   | [OPG-20] 330 |              | [TCTCCCTCCTCCTCTCC]   | [GAGGGAGAGCTGCAGTAC]  |
| 26) | >DW248739   | [OPD-04] 430 |              | [TCTGGTGAAGTTCAAGGA]  | [TACCAGAGGACAACACC]   |
| 27) | >EB643525   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 28) | >EB643541   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 29) | >EB643542   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 30) | >EB643543   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 31) | >EB643546   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 32) | >EB643548   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 33) | >EB643549   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 34) | >EB643552   | [OPF-03] 224 |              | [CCTGATCAAATCAGGGAC]  | [TGATCAGGATTTTATATC]  |
| 35) | >EL563720   | [OPQ-13] 291 |              | [GGAGTGGAAGGCGTGAAA]  | [TCCACTCCTTTGATTTAC]  |
| 36) | >EL563729   | [OPD-14] 245 |              | [CTTCCCCAAGACGCCGAGC] | [TTGGGGAAGTTGACCTTGG] |
| 37) | >EL563735   | [OPB-03] 235 |              | [CATCCCCCAGACCAGCA]   | [GGGGGATGCCCTCCTTGT]  |
| 38) | >EL563739   | [OPQ-13] 292 |              | [GGAGTGGAAGGCGTGAAA]  | [TCCACTCCTTTGATTTTA]  |
| 39) | >EL595430   | [OPI-02] 287 |              | [GGAGGAGAAGAAGGAGAG]  | [CTCTCCTCCACCTTCTCCA] |
| 40) | >EL595437   | [OPK-02] 235 |              | [GTCTCCGCGGTGGCATGC]  | [GCGGAGACGGAGGACGAG]  |
| 41) | >EL595443   | [OPQ-08] 201 |              | [CTCCAGCGGCTCGTGATGC] | [CGCTGGAGTGGGAGCCAT]  |
| 42) | >EL595471   | [OPK-02] 235 |              | [GTCTCCGCGGTGGCATGC]  | [GCGGAGACGGAGGACGAG]  |
| 43) | >EL595518   | [OPB-03] 235 |              | [CATCCCCCTGACCAGCA]   | [GGGGGATGCCCTCCTTGT]  |
| 44) | >EL595551   | [OPI-14] 206 |              | [TGACGGCGGATTCTCTGAG] | [CCGCCGTACCTTCGGCCG]  |
| 45) | >EL595569   | [OPD-14] 245 |              | [CTTCCCCAAGACGCCGAGC] | [TTGGGGAAGTTGACCTTGG] |
| 46) | >EL608661   | [OPZ-04] 200 |              | [AGGCTGTGCCGATTCCCT]  | [CACAGCCTTCACCGTGCT]  |
| 47) | >EL608721   | [OPG-20] 497 |              | [TCTCCCTCGCCCTCGCCA]  | [TGAGGGAGACGAAGGTGTT] |
| 48) | >EL608778   | [OPM-01]304  |              | [GTTGGTGGTGGTATGAT]   | [CCACCAACAGCATTGAAG]  |
| 49) | >EL608794   | [OPP-03] 235 |              | [CTGATACGATTGATAATG]  | [CGTATCAGAGCTCTCAAC]  |
| 50) | >EL608801   | [OPG-20] 333 |              | [TCTCCCTCCTCCTCTCC]   | [GAGGGAGAGCTGCAGTAC]  |
| 51) | >EL608823   | [OPQ-13] 292 |              | [GGAGTGGAAGGCGTGAAA]  | [TCCACTCCTTTGATTTTA]  |

|      |           |          |      |                        |                        |
|------|-----------|----------|------|------------------------|------------------------|
| 52)  | >EL608839 | [OPQ-13] | 292  | [GGAGTGGAAGGCGTGAAA]   | [TCCACTCCTTTGATTTTA]   |
| 53)  | >EL608885 | [OPI-02] | 211  | [GGAGGAGAAGAAGGAAGA]   | [TCTCCTCCTCTTGATCAC]   |
| 54)  | >EL608906 | [OPB-03] | 235  | [CATCCCCCAGACCAGCA]    | [GGGGGATGCCCTCCTTGT]   |
| 55)  | >EL608922 | [OPY-05] | 475  | [GGCTGCGATGGCTACGGG]   | [GTCGCAGCCAGCAACGCGC]  |
| 56)  | >EL608940 | [OPF-05] | 393  | [CCGAATTCGGAGGATTGA]   | [GGAATTCGGTTCAATCCCT]  |
| 57)  | >EL681015 | [OPR-16] | 251  | [CTCTGCGCGCCACGGGAG]   | [ACGCGCAGAGACTATGAGTA] |
| 58)  | >EL681019 | [OPI-03] | 315  | [CAGAAGCCCCGGCCGCCCC]  | [GGCTTCTGGGCTTCAGGA]   |
| 59)  | >EL681039 | [OPI-02] | 476  | [GGAGGAGACGGAGGCGGC]   | [CTCTCCTCCTCTTCTCAGC]  |
| 60)  | >EL681048 | [OPB-03] | 417  | [CATCCCCCTTCCACTCC]    | [GGGGGATGTCGTCGAGGC]   |
| 61)  | >EL681135 | [OPL-11] | 704  | [ACGATGAGTGGTGATTG]    | [CTCATCGTGTGATCACNC]   |
| 62)  | >EL681138 | [OPB-06] | 406  | [TGCTCTGCTATAATCGTA]   | [GCAGAGCATGCTAGTAGT]   |
| 63)  | >EL681142 | [OPS-01] | 701  | [CTACTGCGCGCTTGCCGCG]  | [CGCAGTAGGTTGNCGGTC]   |
| 64)  | >EL681143 | [OPJ-11] | 1100 | [ACTCCTGCGATAGCTCACTG] | [GCAGGAGTGGTGTCATGA]   |
| 65)  | >EL681145 | [OPR-02] | 1188 | [CACAGCTGANGTGCATGA]   | [CAGCTGTGNTACACACAA]   |
| 66)  | >EL681146 | [OPR-17] | 396  | [CCGTACGTACACAGTCAA]   | [ACGTACGGTGTCTCGCAC]   |
| 67)  | >EL681147 | [OPA-14] | 266  | [TCTGTGCTGTACGCGCGTA]  | [AGCACAGAGCGTNTCNGT]   |
| 68)  | >EL681150 | [OPL-04] | 943  | [GACTGCACGTGATCGCGC]   | [TGTGCAGTCTGATATGCAC]  |
| 69)  | >EL681151 | [OPP-03] | 520  | [CTGATACGGCGTGATCTA]   | [CGTATCAGTCTCTCGCGT]   |
| 70)  | >EL681155 | [OPL-11] | 1908 | [ACGATGAGATGATGACGT]   | [CTCATCGTGCGTATCCGC]   |
| 71)  | >EL681160 | [OPL-11] | 938  | [ACGATGAGAACAGGATTG]   | [CTCATCGTCACATCGTCT]   |
| 72)  | >EL681162 | [OPR-16] | 412  | [CTCTGCGCACTGACTACT]   | [ACGCGCAGAGCGAGCATCAT] |
| 73)  | >EL681163 | [OPE-17] | 1067 | [CTACTGCCAGAATACATC]   | [GGCAGTAGATCAGTACGG]   |
| 74)  | >EL681164 | [OPL-04] | 616  | [GACTGCACGACAGACACG]   | [GTGCAGTCNTCTCACGTC]   |
| 75)  | >EL681166 | [OPS-01] | 816  | [CTACTGCGCAGTGCGCATC]  | [CGCAGTAGTGCATGATGA]   |
| 76)  | >EL681170 | [OPG-04] | 353  | [AGCGTGTCGCTGCATGGC]   | [GACACGCTCGTCTGCTCT]   |
| 77)  | >EL681171 | [OPR-09] | 1292 | [TGAGCACGTTATCAGCTC]   | [TCGTGCTCATGTGTTGTGA]  |
| 78)  | >EL681172 | [OPA-08] | 1457 | [GTGACGTAGCTGCTAGCGA]  | [TACGTACGTCNTTATG]     |
| 79)  | >EL681176 | [OPB-06] | 282  | [TGCTCTGCATGCATATGT]   | [GCAGAGCACAAAGTATCGT]  |
| 80)  | >EL681178 | [OPI-10] | 648  | [ACAACGCGAATATGTCGAT]  | [CGCGTTGTCNAGCATANT]   |
| 81)  | >EL681180 | [OPA-10] | 697  | [GTGATCGCTACACTATGC]   | [GCGATCACGTTACGATGT]   |
| 82)  | >EL681183 | [OPF-11] | 1307 | [TTGGTACCATGCCGCGAGT]  | [GGTACCAACTGTGTGCGT]   |
| 83)  | >EL681185 | [OPE-04] | 1128 | [GTGACATGATGTGCAAAT]   | [CATGTACAGTGATAGGNC]   |
| 84)  | >EL681217 | [OPI-16] | 406  | [TCTCCGCCGACAGGTTCA]   | [GGCGGAGATGGCGAGAGT]   |
| 85)  | >EL681245 | [OPE-13] | 663  | [CCCGATTCTAGGGCCGTT]   | [GAATCGGGACCTCCATCA]   |
| 86)  | >EL681288 | [OPB-04] | 326  | [GGACTGGATTCTCCCTCC]   | [TCCAGTCCAGACCGGGCC]   |
| 87)  | >EL681331 | [OPI-16] | 574  | [TCTCCGCCTCACTCGGAC]   | [GGCGGAGATATCAAGGTC]   |
| 88)  | >EL681352 | [OPI-09] | 283  | [TGGAGAGCTCTTCGCCCG]   | [GCTCTCCATAGTTCGGCG]   |
| 89)  | >EL681403 | [OPF-19] | 612  | [CCTCTAGAACCAGAAAG]    | [TCTAGAGGCAAAACACT]    |
| 90)  | >EL681409 | [OPK-17] | 369  | [CCCAGCTGGACCATCAAC]   | [CACAGCTGGGGTCTTCGTCC] |
| 91)  | >EL681430 | [OPR-19] | 240  | [CCTCCTCATCCATGAGGGCG] |                        |
|      |           |          |      | [GATGAGGAGGGCCCCGCTGG] |                        |
| 92)  | >EL681475 | [OPZ-16] | 657  |                        | [TCCCCATCTGTCTACTG]    |
| 93)  | >EL681632 | [OPA-13] | 423  |                        | [CAGCACCTATGCCTCTG]    |
| 94)  | >EL681643 | [OPJ-05] | 762  |                        | [CTCCATGGTTCTGCTTGT]   |
| 95)  | >EL681702 | [OPG-13] | 515  |                        | [CTCTCCGCGTCTCTAAT]    |
| 96)  | >EL681749 | [OPI-02] | 587  |                        | [GGAGGAGAGGGTCTCCATGG] |
| 97)  | >EL681751 | [OPI-16] | 298  |                        | [TCTCCGCCCTCCGCTCCCC]  |
| 98)  | >EL681799 | [OPM-01] | 304  |                        | [GTTGGTGGTGGTGATGAT]   |
| 99)  | >EL681813 | [OPZ-16] | 315  |                        | [TCCCCATCAAAGTCTCT]    |
| 100) | >EL681828 | [OPF-06] | 451  |                        | [GGGAATTCGAGTTCTAGCG]  |
| 101) | >EL681849 | [OPM-02] | 244  |                        | [ACAACGCCAACCGGGACA]   |
| 102) | >EL681873 | [OPM-20] | 245  |                        | [AGGTCTTGCTGCTTGA]     |
| 103) | >EL681899 | [OPB-10] | 486  |                        | [CTGCTGGGTAGTTACTTC]   |
| 104) | >EL681916 | [OPX-08] | 236  |                        | [CAGGGGTGGCATGCAGATC]  |
| 105) | >EL681934 | [OPG-20] | 330  |                        | [TCTCCCTCCTCCTCTCC]    |
| 106) | >EL681952 | [OPI-03] | 266  |                        | [CAGAAGCCCCGGCCGCCCC]  |
| 107) | >EL681991 | [OPG-20] | 330  |                        | [TCTCCCTCCTCCTCTCC]    |
|      |           |          |      |                        | [GATGGGGAGTTCTCGAAT]   |
|      |           |          |      |                        | [GGGTGTGGCCTGCTGCT]    |
|      |           |          |      |                        | [CCATGGAGGTGTAGTAGC]   |
|      |           |          |      |                        | [GCGGAGAGCGGCCATGAG]   |
|      |           |          |      |                        | [TCTCTCCAACAGGAAAG]    |
|      |           |          |      |                        | [GGCGGAGAAAGCGCCGAA]   |
|      |           |          |      |                        | [CCACCAACAGCATTGAAG]   |
|      |           |          |      |                        | [GATGGGGAAGCAGAGTGA]   |
|      |           |          |      |                        | [GAATCCCAAATCTCCA]     |
|      |           |          |      |                        | [GCGGTTGTGGATGCTCTC]   |
|      |           |          |      |                        | [CAAGACCTGAACCAAAAA]   |
|      |           |          |      |                        | [GTCCCAGCAGACGGCCAACA] |
|      |           |          |      |                        | [CCACCCCTGAGCCGAGAA]   |
|      |           |          |      |                        | [GAGGGAGAGCTGCAGTAC]   |
|      |           |          |      |                        | [GGCTTCTGGGCTTCAGGA]   |
|      |           |          |      |                        | [GAGGGAGAGCTGCAGTAC]   |

|                |              |                        |                        |
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| 108) >EL682053 | [OPI-02] 241 | [GGAGGAGAGAAAAGAACGG]  | [TCTCCTCCTCCTTCACGT]   |
| 109) >EL682156 | [OPI-16] 643 | [TCTCCGCCGACGACCTTC]   | [GGCGGAGAAGGTGGGCT]    |
| 110) >EL682189 | [OPF-05] 530 | [CCGAATCTGCCGCCCCG]    | [GAATTCGGCACGAGGAGA]   |
| 111) >EL682200 | [OPI-02] 367 | [GGAGGAGAAGCTGAGGCG]   | [TCTCCTCCTGTGCAATAT]   |
| 112) >EL682214 | [OPF-16] 316 | [GGAGTACTTGGAAGAAGA]   | [AGTACTCCTCATCAGTAA]   |
| 113) >EL682225 | [OPI-16] 211 | [TCTCCGCCGCCACCGCCT]   | [GGCGGAGAGGGCGATGAG]   |
| 114) >EL682227 | [OPR-20] 320 | [ACGGCAAGCCCATCACTC]   | [CCTTGCCGTGCCCATGTC]   |
| 115) >EL682250 | [OPG-13] 515 | [CTCTCCGCGTCTCTAAT]    | [GCGGAGAGCGGCCATGAG]   |
| 116) >EL682275 | [OPK-17] 369 | [CCCAGCTGGACCATCAAC]   | [CACAGCTGGGGTCTTCGTCC] |
| 117) >EL682292 | [OPD-09] 299 | [CTCTGGAGCATGATTACA]   | [CTCCAGAGAACCCCCACT]   |
| 118) >EL682337 | [OPP-15] 417 | [GGAAGCCATGCTTTTCCT]   | [TGGCTTCCAGTGGCGCTT]   |
| 119) >EL682398 | [OPP-09] 517 | [GTGGTCCGTCATCATCAC]   | [CGGACCACGACCGTAGCG]   |
| 120) >EL682422 | [OPF-14] 634 | [TGCTGCAGCACGTGCTAT]   | [CTGCAGCATGAGAGTTCT]   |
| 121) >EL682445 | [OPM-01] 466 | [GTTGGTGGGCACACCAAA]   | [CCACCAACAATAAACCCAG]  |
| 122) >EL682534 | [OPM-13] 289 | [GGTGGTCAGAATCCAAAG]   | [TGACCACCAGTCATGCCG]   |
| 123) >EL682551 | [OPK-16] 519 | [GAGCGTCGTCAGGACCAG]   | [CGACGCTCTGTAAATGGA]   |
| 124) >EL682566 | [OPD-09] 471 | [CTCTGGAGACATCTAGAACA] | [CTCCAGAGTAGGGTCGTG]   |
| 125) >EL682609 | [OPX-07] 772 | [GAGCGAGGTGTTCTGCA]    | [CCTCGCTCGTAGATAATG]   |
| 126) >EL682714 | [OPP-15] 417 | [GGAAGCCATGCTTTTCCT]   | [TGGCTTCCAGTGGCGCTT]   |
| 127) >EL682718 | [OPX-11] 235 | [GGAGCCTCANAAGTTCTCA]  | [GAGGCTCCTTGTGTGACT]   |
| 128) >EL682897 | [OPB-15] 420 | [GGAGGGTGGTGCCAGACG]   | [CACCCTCCAGTGTCAGCC]   |
| 129) >EL682982 | [OPP-03] 230 | [CTGATACGATTGATTAAT]   | [CGTATCAGAGTTTCAACT]   |
| 130) >EL683063 | [OPG-02] 223 | [GGCACTGAAGGCAATTTT]   | [TCAGTGCCTCCATGCCTG]   |
| 131) >EL683247 | [OPF-14] 201 | [TGCTGCAGTTCCAACGTT]   | [CTGCAGCAGGGAGGATCA]   |
| 132) >EL683299 | [OPM-03]     | [GGGGGATGCNGACGATGA]   | [CATCCCCCTTNTCAGTTG]   |
| 133) >EL683594 | [OPX-01] 200 | [CTGGGCACACCGGCAGTG]   | [GTGCCCAGACCTGTGGTC]   |
| 134) >EL683985 | [OPG-06] 369 | [GTGCCTAATATCCGATTA]   | [GTTAGGCACTTGAGTAACA]  |
| 135) >EL684054 | [OPI-02] 212 | [GGAGGAGAACGTGTACAT]   | [CTCTCCTCCTTCTGCTCGA]  |
| 136) >EL684084 | [OPI-06] 504 | [AAGGCGGCCATCGATTCC]   | [CTGCCGCCTTTGCTGCAGCT] |
| 137) >EL684085 | [OPI-02] 408 | [GGAGGAGAGTTGGCTTACC]  | [TCTCCTCCAGATGATCAT]   |
| 138) >EL684090 | [OPI-02] 408 | [GGAGGAGAGTTGGCTTACC]  | [TCTCCTCCAGATGATCAT]   |
| 139) >EL684124 | [OPB-06] 211 | [TGCTCTGCTTACTACAAC]   | [GCAGAGCAACATCCAATT]   |
| 140) >EL684225 | [OPY-05] 660 | [GGCTGCGACGCATCAGTAA]  | [TCGCAGCCCAGAAGTTGA]   |
| 141) >EL684269 | [OPB-10] 200 | [CTGCTGGGGAGTACATGA]   | [TCCCAGCAGCCAATGCAGT]  |
| 142) >EL684310 | [OPM-01] 304 | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]   |
| 143) >EL684340 | [OPM-01] 532 | [GTTGGTGGTGGCTGCAGG]   | [CCACCAACCTGCCATTGC]   |
| 144) >EL684346 | [OPG-20] 508 | [TCTCCCTCGCTCCCCACC]   | [GAGGGAGAGGGGACTCGGA]  |
| 145) >EL684360 | [OPD-14] 468 | [CTTCCCCAATTTCCCTACC]  | [CTTGGGGAAGGAGAGGTCTT] |
| 146) >EL684442 | [OPM-01] 532 | [GTTGGTGGTGGCTGCAGG]   | [CCACCAACCTGCCATTGC]   |
| 147) >EL684511 | [OPM-01] 304 | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]   |
| 148) >EL684532 | [OPN-08] 330 | [ACCTCAGCATCAGTGCT]    | [AGCTGAGGTCGATAGGAAC]  |
| 149) >EL684560 | [OPJ-05] 295 | [CTCCATGGATGAGGATCA]   | [CCATGGAGTCAACCCAC]    |
| 150) >EL684589 | [OPY-05] 660 | [GGCTGCGACGCATCAGTAA]  | [TCGCAGCCCAGAAGTTGA]   |
| 151) >EL684595 | [OPI-02] 381 | [GGAGGAGAAAAGACTCAA]   | [CCTCTCCTCCTCCTCATCGT] |
| 152) >EL684612 | [OPP-19] 222 | [GGGAAGGATTACGGCAGA]   | [TCCTTCCCCATGAACATAT]  |
| 153) >EL684736 | [OPE-07] 386 | [AGATGCAGAAGAACTCGT]   | [CTGCATCTCAGCTGTACT]   |
| 154) >EL684789 | [OPG-18] 410 | [GGCTCATGTAAGGGGTCAT]  | [ACATGAGCCCAAGTCTTCC]  |
| 155) >EL684817 | [OPC-01] 537 | [TTCGAGCCAAAGGCGGCGC]  | [GGCTCGAACACGCCAATC]   |
| 156) >EL684915 | [OPI-02] 208 | [GGAGGAGAATGCTGCCTC]   | [TCTCCTCCATTGCTCTCG]   |
| 157) >EL684954 | [OPB-13] 235 | [TTCGCGGACGACGAGA]     | [CGGGGAATTCCTCCTT]     |
| 158) >EL684957 | [OPP-19] 222 | [GGGAAGGACTATGGCAGGC]  | [TCCTTCCCCATGAGCTGT]   |
| 159) >EL685108 | [OPG-11] 307 | [TGCCCGTCTGCCCCGAAC]   | [GACGGGCAGGTCGAGTGT]   |
| 160) >EL685135 | [OPR-10] 255 | [CCATTCCTACCGCGACC]    | [GGGGAATGGTATCAGGCAT]  |
| 161) >EL685145 | [OPC-17] 433 | [TTCGCGGACGACGAGA]     | [GGGGGGAACCCCTTCTT]    |
| 162) >EL685158 | [OPC-17] 399 | [TTCCCCCAACCTGGGGCC]   | [GGGGGGAACCCCTTCTT]    |
| 163) >EL685161 | [OPP-04] 436 | [TTCCCCCAACCTGGGGCC]   | [GGGGGGAACCCCTTCTT]    |
| 164) >EL685166 | [OPD-09] 299 | [GTGCTCTCATCAACATTCA]  | [TGAGACACACCTGCCTTC]   |
|                |              | [CTCTGGAGCATGATTACA]   | [CTCCAGAGAACCCCCACT]   |

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| 165) >EL685175 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 166) >EL685216 | [OPP-19] 222 | [GGGAAGGACTATGGCAGGC]  | [TCCTTCCCCATGAGCTGT]  |
| 167) >EL685224 | [OPG-20] 327 | [TCTCCCTCCTGCTCCTGC]   | [GAGGGAGAGCTGCAGTAC]  |
| 168) >EL685435 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 169) >EL685550 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 170) >EL685558 | [OPX-05] 384 | [CCTTTCCCCAATAGAGGA]   | [AGGGAAAGGCCTTTATAA]  |
| 171) >EL685571 | [OPA-08]319  | [GTGACGTACGTTGTTTAC]   | [TACGTACGACGTGTACA]   |
| 172) >EL685624 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 173) >EL685672 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 174) >EL685864 | [OPR-20] 320 | [ACGGCAAGCCCATCACTC]   | [CCTTGCCGTGCGCCATGTC] |
| 175) >EL685909 | [OPR-03] 401 | [ACACAGAGGCCTCAAGAGA]  | [CTCTGTGTTTCTTTTCC]   |
| 176) >EL686132 | [OPC-16] 715 | [CACACTCCACACAAGAGTT]  | [GGAGTGTGATTTTATTTT]  |
| 177) >EL686140 | [OPL-15] 342 | [AAGAGAGGACTCGAAGCG]   | [CCTCTCTTCTCCTGCACC]  |
| 178) >EL686213 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 179) >EL686218 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCAGTGAAG]  |
| 180) >EL686324 | [OPI-12] 459 | [AGAGGGCACTGCGAATTCC]  | [TGCCCTCTCAATCCACAA]  |
| 181) >EL686349 | [OPP-19] 222 | [GGGAAGGATTACGGCAGA]   | [TCCTTCCCCATGAAGTAT]  |
| 182) >EL686394 | [OPX-16] 251 | [CTCTGTTCTGGCACCAGT]   | [GAACAGAGCAATAGAAAC]  |
| 183) >EL686412 | [OPD-15] 408 | [CATCCGTGGGGGGAGCAA]   | [CACGGATGCAGTCTAGCA]  |
| 184) >EL686440 | [OPY-15] 359 | [AGTCGCCCCCGATGTCTC]   | [GGGCGACTTCCGCTTCC]   |
| 185) >EL686479 | [OPF-10] 510 | [GGAAGCTTTTGCCTGAGG]   | [AAGCTTCCAGAAGCAGGT]  |
| 186) >EL686507 | [OPJ-18] 235 | [TGGTCGCACACTGGCTGA]   | [TGCGACCATCCTCAAGTT]  |
| 187) >EL686508 | [OPP-13] 636 | [GGAGTGCCTCGATTGTCATT] | [AGGCACTCCTCCTGTGTTG] |
| 188) >EL686524 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 189) >EL686545 | [OPC-10] 402 | [TGTCTGGGATATGTAAA]    | [CCCAGACACCACAAGCTG]  |
| 190) >EL686616 | [OPM-11] 419 | [GTCCACTGGTGTCTTAC]    | [CAGTGGACACCAAATCCT]  |
| 191) >EL686663 | [OPE-14] 587 | [TGCGGCTGTTCCGGCGGT]   | [CAGCCGACAGCCCATAAG]  |
| 192) >EL686685 | [OPX-07] 363 | [GAGCGAGGACCCGCCCTC]   | [CCTCGCTCTGCACCCGGT]  |
| 193) >EL686686 | [OPY-04] 703 | [GGCTGCAATGCGGCACT]    | [TTGCAGCCGCGCTTCTCG]  |
| 194) >EL686722 | [OPB-03] 235 | [CATCCCCCAGACCAGCA]    | [GGGGGATGCCCTCCTTGT]  |
| 195) >EL686777 | [OPJ-18] 235 | [TGGTCGCACACTGGCTGA]   | [TGCGACCATCCTCAAGTT]  |
| 196) >EL686821 | [OPA-13] 435 | [CAGCACCTATGCCACTG]    | [GGGTGCTGGCCTGCTGCT]  |
| 197) >EL687010 | [OPL-15] 266 | [AAGAGAGGATCAACTGCT]   | [CCTCTCTTCCAGGTGCCG]  |
| 198) >EL687046 | [OPP-19] 223 | [GGGAAGGATTACGGCAGA]   | [TCCTTCCCCATGAAGTAT]  |
| 199) >EL687069 | [OPA-13] 435 | [CAGCACCTATGCCACTG]    | [GGGTGCTGGCCTGCTGCT]  |
| 200) >EL687121 | [OPI-02] 280 | [GGAGGAGATCGACGCTGC]   | [TCTCTCCAAAACAAAAT]   |
| 201) >EL687127 | [OPG-14] 530 | [GGATGAGAAAGCCTGAAG]   | [TCTCATCCCCACTCTTGG]  |
| 202) >EL687191 | [OPD-03] 267 | [GTCGCCGTAAATTTCCAC]   | [ACGGCGACAACCTGGCGGG] |
| 203) >EL687243 | [OPF-14] 321 | [TGCTGCAGTTTCTACGGA]   | [CTGCAGCATCTCGAGCGT]  |
| 204) >EL687244 | [OPB-08] 600 | [GTCCACACAGCTGTCTCA]   | [GTGTGGACATAGAGAGGC]  |
| 205) >EL687367 | [OPI-02] 238 | [GGAGGAGAGTGATTATCT]   | [TCTCTCTTTGTCAACT]    |
| 206) >EL687422 | [OPJ-18] 235 | [TGGTCGCACACTGGCTGA]   | [TGCGACCATCCTCAAGTT]  |
| 207) >EL687458 | [OPZ-03] 204 | [CAGCACCGCCTCTTGGCGC]  | [GCGGTGCTGCCGTGCCCGC] |
| 208) >EL687489 | [OPF-14] 212 | [TGCTGCAGCTTTGTAGTG]   | [CTGCAGCACCAGATCCAA]  |
| 209) >EL687558 | [OPE-15] 291 | [ACGCACAAGACTTATACT]   | [TTGTGCGTGAGCTTCTCT]  |
| 210) >EL687564 | [OPD-09] 299 | [CTCTGGAGCATGATTACA]   | [CTCCAGAGAACCCCCACT]  |
| 211) >EL687598 | [OPI-02] 287 | [GGAGGAGAAGAAGGAGAG]   | [CTCTCTCCACCTTCTCCA]  |
| 212) >EL687697 | [OPD-04] 235 | [TCTGGTGACCTTCAGCC]    | [TCACCAGAAGGAACCTCA]  |
| 213) >EL687716 | [OPI-02] 381 | [GGAGGAGAAAAGACTCAA]   | [CCTCTCTCTCTCTCTCGT]  |
| 214) >EL687838 | [OPQ-18] 219 | [AGGCTGGGGAAGGCAACA]   | [CCCAGCCTGAAGTAAGGG]  |
| 215) >EL687862 | [OPM-01]304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]  |
| 216) >EL688028 | [OPY-04] 291 | [GGCTGCAAAAGCCCTCCAT]  | [TTGCAGCCAGAGCCACAA]  |
| 217) >EL688094 | [OPI-03] 315 | [CAGAAGCCCCGGCCGCCCC]  | [GGCTTCTGGGCTTCAGGA]  |
| 218) >EL688176 | [OPQ-20] 378 | [TCGCCAGCTCACCCGCG]    | [CTGGGCGAGGGGAGGGA]   |
| 219) >EL688253 | [OPF-03] 463 | [CCTGATCAGCAGCGCTG]    | [TGATCAGGGGATGCCC]    |
| 220) >EL688264 | [OPL-15] 567 | [AAGAGAGGACAACGGAAG]   | [CCTCTCTTAAAGCTTGCT]  |
| 221) >EL688271 | [OPL-03] 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]  |



|                |               |                        |                        |
|----------------|---------------|------------------------|------------------------|
| 222) >EL688273 | [OPK-15] 313  | [CTCCTGCCGCGAGGGTAT]   | [GGCAGGAGGTGCTGCAGC]   |
| 223) >EL688344 | [OPB-16] 235  | [TTTGGCCGAAACGATGGT]   | [CGGGCAAAAATTGTAACA]   |
| 224) >EL688403 | [OPZ-07] 250  | [CCAGGAGGTCTCAGGAGC]   | [CCTCCTGGCAACTCCAAA]   |
| 225) >EL688425 | [OPL-03] 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 226) >EL688441 | [OPZ-04] 373  | [AGGCTGTGATTGCTGCCG]   | [CACAGCCTTCTCATAGAT]   |
| 227) >EL688469 | [OPL-03] 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 228) >EL688487 | [OPF-13] 305  | [GGCTGCAGAATCAGCTAAGA] | [CTGCAGCCATCACTTGCT]   |
| 229) >EL688513 | [OPL-03] 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 230) >EL688515 | [OPM-01] 304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]   |
| 231) >EL688528 | [OPL-15] 500  | [AAGAGAGGATAGCTTAAC]   | [CCTCTCTTATCAGATTGC]   |
| 232) >EL688535 | [OPN-20] 237  | [GGTGCTCCGCCTCCGTGGA]  | [ACGGAGCACCAGATGGAGGG] |
| 233) >EL688559 | [OPL-03] 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 234) >EL688573 | [OPI-02] 220  | [GGAGGAGAAGAAAGGTTT]   | [TCTCCTCCCCCTCCATTCC]  |
| 235) >EL688598 | [OPE-18] 440  | [GGACTGCATGTGTCGTTT]   | [TGCAGTCCCAGCAGATCC]   |
| 236) >EL688737 | [OPS-07] 604  | [TCCGATGCTGTCCCTGCGGA] | [GCATCGGAGAAGAGAGCC]   |
| 237) >EL688823 | [OPN-20] 238  | [GGTGCTCCGCCTCCGTGGA]  | [ACGGAGCACCAGATGGAGGG] |
| 238) >EL688899 | [OPL-09] 247  | [TGCGAGAGGGAGAATCCC]   | [CTCTCGCAGCAGCTCCAA]   |
| 239) >EL689055 | [OPI-02] 297  | [GGAGGAGATTCCGTAAAA]   | [CTCTCCTCCTGATCTTTCT]  |
| 240) >EL689143 | [OPL-03] 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 241) >EL689146 | [OPF-14] 212  | [TGCTGCAGCTTTGTAGTG]   | [CTGCAGCACCAGATCCAA]   |
| 242) >EL689194 | [OPI-02] 584  | [GGAGGAGAAGCTCATCAT]   | [CTCTCCTCCCCCAGAAGGC]  |
| 243) >EL689196 | [OPB-03] 463  | [CATCCCCCGGACCAGCA]    | [GGGGGATGCCTCTTTAT]    |
| 244) >EL689212 | [OPQ-18] 372  | [AGGCTGGGCATGCAAAGG]   | [CCCAGCCTAGTAGCAATC]   |
| 245) >EL689303 | [OPK-17] 491  | [CCCAGCTGGAGCAGTTGA]   | [CAGCTGGGACTTCACAGA]   |
| 246) >EL689311 | [OPE-18] 385  | [GGACTGCATCTTCGCTCC]   | [TGCAGTCCAGCGAACTCT]   |
| 247) >EL689337 | [OPF-13] 430  | [GGCTGCAGGTGCTTTGTG]   | [CTGCAGCCATGGAGAAGA]   |
| 248) >EL689352 | [OPS-04] 394  | [CACCCCTGAGCAGATAC]    | [AGGGGGTGGCTGAGTCTG]   |
| 249) >EL689380 | [OPX-19] 486  | [TGGCAAGGAGTTGGCTTC]   | [CCTTGCCAATGTCTAGCA]   |
| 250) >EL689383 | [OPL-03] 609  | [CCAGCAGCCGTCCCAGAT]   | [AGCTGCTGGACCAACCCGC]  |
| 251) >EL689396 | [OPC-19] 403  | [GTTGCCAGACTCATTGGT]   | [CTGGCAACCTTCCTAAGT]   |
| 252) >EL689413 | [OPM-18] 268  | [CACCATCCTCTCCTCCCA]   | [GGATGGTGAAATGCGCCA]   |
| 253) >EL689508 | [OPE-18] 436  | [GGACTGCATGGTCATTTG]   | [TGCAGTCCCACCAAGATCC]  |
| 254) >EL689536 | [OPK-20] 558  | [GTGTGCGGAGCCCTTCCTCC] | [CGCGACACTTGCACACTC]   |
| 255) >EL689564 | [OPY-07] 546  | [AGAGCCGTCGATCGATTGA]  | [ACGGCTCTCGAGCGATCT]   |
| 256) >EL689573 | [OPL-04] 1390 | [GACTGCACGTCCATGCGT]   | [GTGCAGTCGTATGATGTA]   |
| 257) >EL689591 | [OPE-07] 781  | [AGATGCAGTTACTCAGAT]   | [CTGCATCTGTCTAGATGA]   |
| 258) >EL689603 | [OPN-12] 278  | [CACAGACATAGTCACACG]   | [TGTCTGTGTATCGTGAGA]   |
| 259) >EL689622 | [OPN-12] 802  | [CACAGACAGACATACACG]   | [GTGTCTGTGTAGACTCTGG]  |
| 260) >EL689648 | [OPJ-08] 1133 | [CATACCGTCAGAGACATA]   | [ACGGTATGGATCTCAGTC]   |
| 261) >EL689650 | [OPL-03] 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 262) >EL689663 | [OPI-07] 394  | [CAGCGACATATCACGGAA]   | [TGTGCTGTTCTTACCCA]    |
| 263) >EL689664 | [OPB-06] 1195 | [TGCTCTGCTATCTCCTTT]   | [GCAGAGCACGGGCAAGGA]   |
| 264) >EL689669 | [OPR-03] 240  | [ACACAGAGAGAGCGCAAT]   | [CTCTGTGTCAGTCTCTGC]   |
| 265) >EL689670 | [OPG-20] 675  | [TCTCCCTCTACTTATCTA]   | [GAGGGAGAGAAGGTAGAA]   |
| 266) >EL689677 | [OPR-03] 300  | [ACACAGAGATACTGACAG]   | [CTCTGTGTATGTCCATCT]   |
| 267) >EL689678 | [OPS-01] 952  | [CTACTGCGTCAGACATCT]   | [GCGCAGTAGACTGTCTCTG]  |
| 268) >EL689679 | [OPG-20] 284  | [TCTCCCTCCTTTCCCGT]    | [GAGGGAGACGGGAGAGAG]   |
| 269) >EL689683 | [OPX-05] 474  | [CCTTTCCCCACCCAGTTT]   | [GAGGGAAAGGGAGATAGCCA] |
| 270) >EL689684 | [OPN-12] 927  | [CACAGACACAGCATACGAG]  | [GTGTCTGTGAGTATAGCGA]  |
| 271) >EL689688 | [OPN-12] 681  | [CACAGACATAGAGACTTA]   | [TGTCTGTGTGTGCGACAA]   |
| 272) >EL689694 | [OPA-10] 703  | [GTGATCGTTGCGAAATC]    | [GCGATCACTCTGTCTAGCG]  |
| 273) >EL689705 | [OPR-03] 772  | [ACACAGAGACATACACAC]   | [CTCTGTGTAAGTGTCTGT]   |
| 274) >EL689706 | [OPR-03] 420  | [ACACAGAGATATATCTCT]   | [CTCTGTGTATATGTATCT]   |
| 275) >EL689709 | [OPL-09] 598  | [TGCGAGAGAGAGATATAG]   | [CTCTCGCATCATATAGAG]   |
| 276) >EL689730 | [OPK-19] 251  | [CACAGGCGCAGCCTCTCT]   | [CGCCTGTGAGGGGACGGGA]  |
| 277) >EL689756 | [OPI-02] 220  | [GGAGGAGAAGAAAGGTTT]   | [TCTCCTCCCCCTCCATTCC]  |
| 278) >EL689781 | [OPN-12] 530  | [CACAGACATCGACTGACA]   | [TGTCTGTGTGCGGCACGT]   |

|               |          |      |                        |                        |
|---------------|----------|------|------------------------|------------------------|
| 279)>EL689816 | [OPJ-13] | 1400 | [CCACACTATCTATTACAT]   | [TAGTGTGGTAGAGTACAG]   |
| 280)>EL689832 | [OPC-16] | 1617 | [CACACTCCCNNTTCGCTAG]  | [TGGAGTGTGCTCTATGTGG]  |
| 281)>EL689852 | [OPN-12] | 676  | [CACAGACAACTCTCACAG]   | [TGTCTGTGTATGAATATA]   |
| 282)>EL689853 | [OPD-17] | 546  | [TTTCCCACTTCCGGGTGT]   | [GTGGGAAAGCCTACAAAG]   |
| 283)>EL689877 | [OPC-11] | 521  | [AAAGCTGCTTGGTTGTCT]   | [GCAGCTTTAAGTACATGT]   |
| 284)>EL689889 | [OPL-03] | 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 285)>EL689907 | [OPG-20] | 409  | [TCTCCCTCAAAACGTCCCA]  | [GAGGGAGAGATATGNGCG]   |
| 286)>EL690007 | [OPR-20] | 320  | [ACGGCAAGCCCATCACTC]   | [CCTTGCCGTGCGCCATGTC]  |
| 287)>EL690065 | [OPX-16] | 251  | [CTCTGTTCTGGCACCGGT]   | [GAACAGAGCAATAGAAAC]   |
| 288)>EL690113 | [OPL-19] | 223  | [GAGTGGTGTAGGAGTATT]   | [GTCACCACTCGCTTAGTCCT] |
| 289)>EL690152 | [OPM-09] |      | [GTCTTGCGCACTCATTGA]   | [CGCAAGACTGCGAGACAC]   |
| 290)>EL690157 | [OPL-19] | 504  | [GAGTGGTGGAGTGCGAAC]   | [CACCACTCCACGGCAGCT]   |
| 291)>EL690163 | [OPB-03] | 493  | [CATCCCCCAGACACCCTC]   | [GGGGGATGGTGGTGTGGG]   |
| 292)>EL690167 | [OPI-07] | 856  | [CAGCGACACCGAGACGCA]   | [TGTCGCTGCATTTCGCGC]   |
| 293)>EL690176 | [OPB-06] | 253  | [TGCTCTGCGCTGTCGCTG]   | [GCAGAGCACGACAAACC]    |
| 294)>EL690284 | [OPL-06] | 594  | [GAGGGAAGCGAGAGCGAG]   | [CTTCCCTCCTTCTCATCT]   |
| 295)>EL690318 | [OPB-15] | 493  | [GGAGGGTGGGTGATGTCA]   | [ACACCTCCAGATCCTAGC]   |
| 296)>EL690364 | [OPC-17] | 263  | [TTCCCCCCCCCGGGGGG]    | [GGGGGAAAAAAGGAGGAG]   |
| 297)>EL690366 | [OPX-07] | 297  | [GAGCGAGGAGGAGGCGGG]   | [CCTCGCTCTTCGTTCTG]    |
| 298)>EL690373 | [OPP-19] | 222  | [GGGAAGGACTACGGCAGGC]  | [TCCTTCCCCACGAGCTGT]   |
| 299)>EL690393 | [OPJ-18] | 235  | [TGGTCGCACACTGGCTGA]   | [TGCGACCATCCTCAAGTT]   |
| 300)>EL690413 | [OPN-08] | 330  | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAC]  |
| 301)>EL690419 | [OPG-20] | 327  | [TCTCCCTCCTGCTCCTGC]   | [GAGGGAGAGCTGCAGTAC]   |
| 302)>EL690465 | [OPN-08] | 330  | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAC]  |
| 303)>EL690505 | [OPI-02] | 220  | [GGAGGAGAAGAAAGGTTT]   | [TCTCCTCCCCCCTCATCC]   |
| 304)>EL690521 | [OPP-19] | 222  | [GGGAAGGACTACGGCAGGC]  | [TCCTTCCCCACGAGCTGT]   |
| 305)>EL690528 | [OPP-19] | 222  | [GGGAAGGACTATGGCAGGC]  | [TCCTTCCCCATGAGCTGT]   |
| 306)>EL690545 | [OPP-20] | 443  | [GACCCTAGCAGATGTTTG]   | [CTAGGGTCGATATACTTT]   |
| 307)>EL690564 | [OPI-02] | 212  | [GGAGGAGAACGTGTACAT]   | [CTCTCCTCCTTCTGCTCAA]  |
| 308)>EL690583 | [OPE-07] | 442  | [AGATGCAGTTGAAATCTT]   | [CTGCATCTGTGATGCAAA]   |
| 309)>EL690609 | [OPF-06] | 235  | [GGGAATTCCTCCTTGTCT]   | [GAATTCCTCCCGGACCAGC]  |
| 310)>EL690611 | [OPG-14] | 694  | [GGATGAGATGACAAGCCT]   | [TCTCATCCTCGTCAATGC]   |
| 311)>EL690651 | [OPN-20] | 236  | [GGTGCTCCGCCTTAGGGGA]  | [CGGAGCACCAGGTGGAGGG]  |
| 312)>EL690684 | [OPN-08] | 330  | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAC]  |
| 313)>EL690691 | [OPN-10] | 395  | [ACAAGTGGGATGGAAGTGG]  | [CCAGTTGTGATGGCCTCT]   |
| 314)>EL690710 | [OPF-09] | 319  | [CCAAGCTTATCAGTAATT]   | [AAGCTTGGAGAGATCGTC]   |
| 315)>EL690759 | [OPL-03] | 235  | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 316)>EL690879 | [OPX-11] | 227  | [GGAGCCTCTGGTCCCAA]    | [CTGAGGCTCCCTCTCAAGGA] |
| 317)>EL690896 | [OPF-10] | 658  | [GGAAGCTTATTGCAGTTA]   | [CAAGCTTCCAAATGGAACA]  |
| 318)>EL690905 | [OPB-03] | 650  | [CATCCCCATACTCTCGT]    | [AGGGGGATGAGTCTGTTGG]  |
| 319)>EL690913 | [OPC-16] | 741  | [CACACTCCTCTTCGTCTA]   | [GGAGTGTGAGTCACTAGA]   |
| 320)>EL690938 | [OPA-10] | 887  | [GTGATCGCTATACTACTA]   | [GCGATCACTAGATTGTAC]   |
| 321)>EL690994 | [OPR-19] | 241  | [CCTCCTCATCATGTCTACAA] | [TGAGGAGGAGGAGGAGGA]   |
| 322)>EL691025 | [OPA-14] | 301  | [TCTGTGCTCAAGAGGGTG]   | [AGCACAGACATAGCCAC]    |
| 323)>EL691038 | [OPM-01] | 304  | [GTTGGTGGTGGTGATGAT]   | [CCACCAACAGCATTGAAG]   |
| 324)>EL691139 | [OPI-13] | 324  | [CTGGGGCTTCTTTGAGAT]   | [CAGCCCCAGGTTCTCACAC]  |
| 325)>EL691212 | [OPI-02] | 287  | [GGAGGAGAAGAAGGAGAG]   | [CTCTCCTCCACCTTCTCCA]  |
| 326)>EL691240 | [OPI-17] | 250  | [GGTGGTGAAGCTCCCCCG]   | [TCACCACCATCCCCATGA]   |
| 327)>EL691263 | [OPN-08] | 330  | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAC]  |
| 328)>EL691265 | [OPI-17] | 250  | [GGTGGTGAAGCTCCCCCG]   | [TCACCACCATCCCCATGA]   |
| 329)>EL691291 | [OPE-10] | 315  | [CACCAGGTGGAGACCATTG]  | [ACCTGGTGATCTTGGTGA]   |
| 330)>EL691337 | [OPD-04] | 429  | [TCTGGTGACCGCACACTG]   | [TCACCAGAGAGCTTATGG]   |
| 331)>EL691341 | [OPI-17] | 250  | [GGTGGTGAAGCTCCCCCG]   | [TCACCACCATCCCCATGA]   |
| 332)>EL691422 | [OPG-18] | 408  | [GGCTCATGTAAGGGGTCAT]  | [ACATGAGCCCAAGTCTTCC]  |
| 333)>EL691490 | [OPK-17] | 446  | [CCCAGCTGTTCAAACTA]    | [CAGCTGGGAAGATCAACC]   |
| 334)>EL691494 | [OPJ-18] | 235  | [TGGTCGCACACTGGCTGA]   | [TGCGACCATCCTCAAGTT]   |

492

335) >EL691626 [OPI-17] 228  
[CATCACCACCAACATGAAGT]  
336) >EL691634 [OPI-16] 406  
337) >EL691669 [OPM-01] 304  
338) >EL691702 [OPK-04] 241  
339) >EL691712 [OPB-04] 209  
340) >EL691736 [OPL-18] 312  
341) >EL691784 [OPC-15] 300  
342) >EL691869 [OPC-17] 353  
343) >EL691944 [OPN-12] 241  
344) >EL691984 [OPS-03] 282  
345) >EL692246 [OPF-04] 271  
346) >EL692394 [OPC-06] 260  
347) >EL692403 [OPC-17] 692  
348) >EL692404 [OPC-17] 376  
349) >EL692457 [OPZ-16] 417  
350) >EL692562 [OPI-17] 289  
351) >EL692623 [OPC-17] 272  
352) >EL692668 [OPB-18] 306  
353) >EL692671 [OPN-06] 957  
354) >EL692689 [OPI-02] 266  
355) >EL692769 [OPI-02] 264  
356) >EL692780 [OPN-13] 233  
357) >EL692803 [OPI-02] 768  
358) >EL692845 [OPI-17] 367  
359) >EL692999 [OPZ-16] 220  
360) >EL693037 [OPN-20] 238  
361) >EL693054 [OPL-20] 235  
362) >EL693306 [OPN-12] 206  
363) >EL693317 [OPL-11] 1902  
364) >EL693363 [OPZ-07] 250  
365) >EL693364 [OPZ-07] 253  
366) >EL693485 [OPQ-19] 549  
367) >EL693512 [OPC-14] 661  
368) >EL693558 [OPL-10] 261  
369) >EL693568 [OPE-09] 350  
370) >EL693616 [OPN-20] 236  
371) >EL693620 [OPB-03] 234  
372) >EL693663 [OPB-13] 237  
373) >EL693671 [OPK-02] 620  
374) >EL693812 [OPA-05] 394  
375) >EL693834 [OPC-16] 559  
376) >EL693896 [OPG-14] 1062  
377) >EL693902 [OPE-07] 469  
378) >EL693954 [OPN-06] 594  
379) >EL693955 [OPL-18] 509  
380) >EL693996 [OPA-10] 260  
381) >EL693999 [OPP-14] 1265  
382) >EL694003 [OPN-12] 444  
383) >EL694021 [OPI-17] 1522  
384) >EL694050 [OPE-15] 1419  
385) >EL694066 [OPE-15] 231  
386) >EL694082 [OPF-17] 310  
387) >EL694250 [OPK-15] 249  
388) >EL694327 [OPL-18] 295  
389) >EL694627 [OPN-08] 250  
390) >EL694717 [OPQ-02] 500

[GGTGGTGATGGAGCTGCTGT]  
[TCTCCGCCGACAGGTTCA] [GGCGGAGATGGCGAGAGT]  
[GTTGGTGGTGGTGATGAT] [CCACCAACAGCATTGAAG]  
[CCGCCCAATTCTGTTAAAG] [TTGGGCGGGTAGTTGGCC]  
[GGACTGGAGATTACATGGT] [CTCCAGTCCCCATGCTCCT]  
[ACCACCCACCTCCCCAGTAG] [TGGGTGGTTTTCATTTTG]  
[GACGGATCTATCGAACCG] [CTGATCCGTCGATCAGGTGC]  
[TTCCCCCCTTTAAAAAAA] [GGGGGGAAGCCGCTCTC]  
[CACAGACAACAATCTATA] [GTGTCTGTGCATGTGTGTG]  
[CAGAGGTCTATGGGCAGT] [GACCTCTGCTGGTGGTAC]  
[GGTGATCATAAATATCGA] [TGATCACCTTGACGATT]  
[GAACGGACTGGATGAATGG] [GTCCGTTCCGGTCGTCGGT]  
[TTCCCCCCTCACAATCT] [GGGGGGAAGAAGGAGGAA]  
[TTCCCCCCTCTCTCTTC] [GGGGGGAAGGAGGAGGA]  
[TCCCCATCTCTCTTCTA] [GATGGGGAACAGGGACAC]  
[GGTGGTGAGATTCAAGGA] [TCACCACCACACTGGTGT]  
[TTCCCCCACTCATCCTCA] [GGGGGGAAGGGGAGAGGA]  
[CCACAGCATANGAATAAA] [TGCTGTGGGCGCTCTGT]  
[GAGACGCACAGCAGTGCCA] [GTGCGTCTGTGCGGTGAG]  
[GGAGGAGACCCATGCCCT] [TCTCCTCCAACCTAAACA]  
[GGAGGAGAAAGAGTTGTA] [TCTCCTCCTCCGCTCTC]  
[AGCGTCACTTAATCCGAAT] [GAGTGACGTATTCTGTGACT]  
[GGAGGAGAATTGCGACAG] [TCTCCTCCTGAGCGGCTC]  
[GGTGGTGACGAGGGAGTA] [TCACCACCATGGCCTCAA]  
[TCCCCATCTGCGAGATCT] [GATGGGGAGATCCACGGT]  
[GGTGCTCCGCTTAGGGGA] [CGGAGCACCAGGTGGAGG]  
[TGGTGGACTTGCATGGGA] [GGTCCACCATGGTTGTGTA]  
[CACAGACAAGACATCCAT] [TGTCTGTGTACTAAGTCC]  
[ACGATGAGGAATGAGAGG] [CTCATCGTTCTGTCTGGC]  
[CCAGGAGGTCTGATGAGC] [CCTCCTGGCCACTCCAAA]  
[CCAGGAGGTCTGATGAGC] [CCTCCTGGGCCAGTCCG]  
[CCCCCTATGCATGGAGTG] [ATAGGGGGAGTAACTCTC]  
[TGCGTGCTGCCGTGTCGC] [AGCACGCACACGCNACAG]  
[TGGGAGATATGCCTAGAG] [CATCTCCACAAGTTCAAC]  
[CTTACCCTCATCGTCCT] [CGGGTGAAGTAGATGTAGC]  
[GGTGCTCCGCTTAGGGGA] [CGGAGCACCAGGTGGAGGG]  
[CATCCCCAGACCAGCAG] [GGGGGATGCCCTCCTGT]  
[TTCCCCCGTGACAGCAAA] [CGGGGGAATTCCTCCTT]  
[GTCTCCGCGCAACAACAC] [GCGGAGACAGTTTATGTG]  
[AGGGGTCTTCAATGGGTG] [AAGACCCCTGCGTAAAGT]  
[CACACTCCTCCTGCCACC] [GGAGTGTGCGGCTGCAGG]  
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[AGATGCAGGATGTGGAGG] [CTGCATCTTGACAACACT]  
[GAGACGCATTCTACTCAA] [TGCGTCTCAGTCGGGTGG]  
[ACCACCCAACTCATTGCC] [TGGGTGGTATGAATTGTA]  
[GTGATCGCGCATGGCGGT] [GCGATCACGTCACACGTC]  
[CCAGCCGAGCCGCGGACA] [TCGGCTGGGCATAAAGCG]  
[CACAGACAGGACCAAACA] [TGTCTGTGAGGTTGTGTG]  
[GGTGGTGACCCACTTTTC] [TCACCACCAGATNACATA]  
[ACGCACAAACATNTAGGA] [TTGTGCGTGCGTGACGCC]  
[ACGCACAACGACAGAAAGA] [TTGTGCGTGTGTGGGGGT]  
[AACCCGGGACATTGCTTCG] [CCCCGGTTAAATTGCCGG]  
[CTCCTGCCTGCCTCAACT] [TGGCAGGAGCAGAGAGTGC]  
[ACCACCCAGGGTGTACCC] [GTGGGTGGTGTGGGAGAGG]  
[ACCTCAGCAAAAAGCCAG] [GCTGAGGTGGGACCCATC]  
[TCTGTGGTGTGGTTTGAT] [CCGACAGAAGTGCATCCA]

391) >EL694827 [OPB-14] 336  
 392) >EL694955 [OPZ-07] 516  
 393) >EL694961 [OPF-14] 212  
 394) >EL694967 [OPX-19] 689  
 395) >EL695053 [OPB-13] 235  
 396) >EL695133 [OPZ-07] 516  
 397) >EL695166 [OPZ-07] 516  
 398) >EL695246 [OPL-03] 347  
 399) >EL695306 [OPY-15] 359  
 400) >EL695332 [OPX-08] 304  
 401) >EL695346 [OPG-20] 327  
 402) >EL695500 [OPM-18] 336  
 403) >EL930251 [OPI-16] 204  
 404) >EL930269 [OPQ-16] 357  
 405) >EL930296 [OPJ-05] 295  
 406) >EL930309 [OPF-04] 434  
 407) >EL930316 [OPB-03] 241  
 408) >EL930342 [OPD-09] 299  
 409) >EL930358 [OPI-02] 287  
 410) >EL930421 [OPI-02] 471  
 411) >EL930449 [OPA-10] 220  
 412) >EL930467 [OPQ-17] 308  
 413) >EL930518 [OPI-16] 271  
 414) >EL930565 [OPE-07] 241  
 415) >EL930589 [OPI-02] 431  
 416) >ES273657 [OPB-03] 235  
 417) >ES273659 [OPD-02] 534  
 418) >ES273678 [OPA-13] 327  
 419) >ES273686 [OPI-17] 356  
 420) >ES273689 [OPI-02] 431  
 421) >ES273720 [OPF-14] 346  
 422) >ES273721 [OPB-03] 235  
 423) >ES273743 [OPP-03] 235  
 424) >ES273749 [OPP-03] 235  
 425) >ES273811 [OPP-13] 378  
 426) >ES273836 [OPR-19] 240  
 [GATGAGGAGGGCCCCGCTGG]  
 427) >ES273871 [OPB-03] 235  
 428) >ES273877 [OPB-03] 235  
 429) >ES273881 [OPI-02] 212  
 430) >ES323722 [OPB-03] 463  
 431) >ES323762 [OPG-20] 563  
 432) >ES323813 [OPM-08] 332  
 433) >ES323817 [OPK-03] 340  
 434) >ES323859 [OPX-08] 236  
 435) >ES323868 [OPP-03] 235  
 436) >ES323874 [OPZ-20] 235  
 437) >ES323893 [OPJ-15] 228  
 438) >ES324003 [OPL-07] 372  
 439) >ES324037 [OPB-03] 235  
 440) >ES324063 [OPB-03] 235  
 441) >ES370553 [OPQ-17] 265  
 442) >ES370561 [OPM-18] 272  
 443) >ES370595 [OPI-02] 287  
 444) >ES370622 [OPB-03] 234  
 445) >ES370656 [OPP-13] 379  
 446) >ES370729 [OPL-03] 235

[TCCGCTCTCCTCCATCTC] [AGAGCGGAGACGAGGCTG]  
 [CCAGGAGGACTCAACCCGCC] [CCTCCTGGCAGAACCTCA]  
 [TGCTGCAGTTGCCTGCC] [CTGCAGCAGAACTGCCCG]  
 [TGGCAAGGGGATTGAAGA] [CCTTGCCAATGGTGAAGA]  
 [TTCCCCCGGACCAGCAGA] [CGGGGGAATTCCTCCTT]  
 [CCAGGAGGACTCAACCCGCC] [CCTCCTGGCAGAACCTCA]  
 [CCAGGAGGACTCAACCCGCC] [CCTCCTGGCAGAACCTCA]  
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 [TCTCCTCCTGCTCCTGC] [GAGGGAGAGCTGCAGTAC]  
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 [GAAGCCCTGTTCTGTGCAC] [AGGGCTTCTGCTTATGCT]  
 [CACCATCCCCGGCGCCCG] [GGATGGTGTAGNTGAGGC]  
 [GGAGGAGAAGAAGGAGAG] [CTCTCCTCCACCTTCTCCA]  
 [CATCCCCCGGACCAGCA] [GGGGGATGCCCTCCTTGT]  
 [GGAGTGCCTCGATTGTCATT] [AGGCACTCCTCCTGTGTGC]  
 [CCAGCAGCGTCTGATCTT] [GCTGCTGGTCCGGCGGAA]

|               |          |     |                        |                        |
|---------------|----------|-----|------------------------|------------------------|
| 447)>ES370811 | [OPB-03] | 235 | [CATCCCCCAGACCAGCA]    | [GGGGGATGCCCTCCTGT]    |
| 448)>ES370825 | [OPI-02] | 212 | [GGAGGAGAACGTGTACAT]   | [CTCTCCTCCTCTGCTCGA]   |
| 449)>ES370900 | [OPB-03] | 234 | [CATCCCCCGGACCAGCA]    | [GGGGGATGCCNTCCTGT]    |
| 450)>ES370908 | [OPF-03] | 482 | [CCTGATCAATCGCTGGAG]   | [GTGATCAGGCTGATGAGCG]  |
| 451)>ES414425 | [OPX-12] | 336 | [TCGCCAGCTGGGAGGATG]   | [TGGCTGGCGACGTTCTCGCG] |
| 452)>ES414428 | [OPB-03] | 393 | [CATCCCCCGCTCAAAAA]    | [GGGGGATGTGCCCCGTCT]   |
| 453)>ES414488 | [OPA-13] | 327 | [CAGCACCCGAATCTTGTG]   | [GGGTGCTGATGTGGGTGT]   |
| 454)>ES414497 | [OPG-20] | 328 | [TCTCCCTCACCTTCATCAC]  | [GAGGGAGAGCAGCAATAG]   |
| 455)>ES414548 | [OPI-16] | 605 | [TCTCCGCCACAGTTCCTC]   | [GGCGGAGATGAGCTGCTG]   |
| 456)>ES414552 | [OPR-19] | 206 | [CCTCCTCAGCCACCGCCG]   | [TGAGGAGGAGAACGAGGG]   |
| 457)>ES414596 | [OPL-03] | 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 458)>ES414649 | [OPJ-11] | 326 | [ACTCCTGCTCAAGATAAA]   | [GCAGGAGTTGGCCACAGC]   |
| 459)>ES414732 | [OPZ-16] | 418 | [TCCCCATCTCCCCACTAT]   | [GATGGGGATGAGAGAATC]   |
| 460)>ES414739 | [OPI-02] | 460 | [GGAGGAGAGGACGAAGAAGA] | [TCTCCTCCACTTGAGTCA]   |
| 461)>ES414773 | [OPB-06] | 457 | [TGCTCTGCGACGCCGAGG]   | [GCAGAGCAGTGGNATCCC]   |
| 462)>EY396184 | [OPZ-05] | 406 | [TCCCATGCCTCCAATGTC]   | [GCATGGGATGCATGCCAT]   |
| 463)>EY396208 | [OPM-01] | 304 | [GTTGGTGAGGATGATGAT]   | [CCACCAACAGCATTGAAG]   |
| 464)>EY396328 | [OPI-17] | 367 | [GGTGGTGACGAGGGAGTA]   | [TCACCACCATGGCCTCAA]   |
| 465)>EY396489 | [OPP-13] | 254 | [GGAGTGCCACTGCGTGCC]   | [GGCACTCCAAAAACAAC]    |
| 466)>EY396578 | [OPP-13] | 254 | [GGAGTGCCACTGCGTGCC]   | [GGCACTCCAAAAACAAC]    |
| 467)>EY396802 | [OPB-17] | 303 | [AGGGAACGTTCCAAAAAC]   | [CGTTCCCTTGCCCTTCTT]   |
| 468)>EY397142 | [OPJ-15] | 340 | [TGTAGCAGTACCAGCAAA]   | [CTGCTACATACTTATCTA]   |
| 469)>EY398259 | [OPX-05] | 217 | [CCTTTCCAGCGCAGCAG]    | [GGGAAAGGCATGGACTTC]   |
| 470)>EY398616 | [OPE-10] | 397 | [CACCAGGTGCAATTACTCC]  | [ACCTGGTGATGAATTAAT]   |
| 471)>EY398667 | [OPI-02] | 311 | [GGAGGAGAGGGCATTTTCTG] | [CTCTCCTCCTCAAATTGTT]  |
| 472)>EY399503 | [OPA-13] | 435 | [CAGCACCTATGCCACTG]    | [GGGTGCTGGCCTGCTGCT]   |
| 473)>EY399570 | [OPF-13] | 340 | [GGCTGCAGAGATACTTTCA]  | [CTGCAGCCATGGGGACCG]   |
| 474)>EY399637 | [OPL-09] | 247 | [TGCGAGAGGGGGAATCCC]   | [CTCTCGCAGCAGCTCCAA]   |
| 475)>EY400003 | [OPE-07] | 371 | [AGATGCAGTTTCGAATTT]   | [CTGCATCTGCCTCCTGAA]   |
| 476)>EY400240 | [OPF-09] | 379 | [CCAAGCTTCCACCAATTTT]  | [AAGCTTGGGTCTGCTCGG]   |
| 477)>EY400513 | [OPE-07] | 255 | [AGATGCAGGCTCAAGAAA]   | [CTGCATCTTGGCAGAGCT]   |
| 478)>EY400555 | [OPJ-15] | 340 | [TGTAGCAGTACCAGCAAA]   | [CTGCTACATACTTATCCA]   |
| 479)>EY400580 | [OPF-13] | 340 | [GGCTGCAGAGATACTTTCA]  | [CTGCAGCCATGGGGACCG]   |
| 480)>EY400593 | [OPL-09] | 247 | [TGCGAGAGGGGGAATTCC]   | [CTCTCGCAGTAGCTCCAA]   |
| 481)>EY401002 | [OPE-07] | 314 | [AGATGCAGCTGTTGGCATT]  | [CTGCATCTGCAATTAGCA]   |
| 482)>EY401213 | [OPZ-04] | 286 | [AGGCTGTGGTAAGGCCTT]   | [CACAGCCTTCATATGGAC]   |
| 483)>EY401537 | [OPF-09] | 379 | [CCAAGCTTCCACCAATTTT]  | [AAGCTTGGGTCTGCTCGG]   |
| 484)>EY401560 | [OPF-03] | 310 | [CCTGATCAAGGAAGTGGA]   | [TGATCAGGTGTTTCCCCA]   |
| 485)>EY401593 | [OPI-09] | 433 | [TGGAGAGCACCCGCTGAGC]  | [GCTCTCCATCATGTTTCT]   |
| 486)>EY402047 | [OPF-04] | 508 | [GGTGATCATGCTGGTGTT]   | [TGATCACCGGAAGCAGTG]   |
| 487)>EY402331 | [OPE-03] | 404 | [CCAGATGCAGTGGTTCTCC]  | [TGATCTGGAGGTCTGGCC]   |
| 488)>EY402355 | [OPI-09] | 433 | [TGGAGAGCACCCGCTGAGC]  | [GCTCTCCATCATGTTTCT]   |
| 489)>EY402472 | [OPF-13] | 340 | [GGCTGCAGAGATACTTTCA]  | [CTGCAGCCATGGGGACCG]   |
| 490)>EY402492 | [OPI-17] | 433 | [GGTGGTGAAGATGCAGTA]   | [TCACCACCACTCGCGAAA]   |
| 491)>EY402552 | [OPG-18] | 407 | [GGCTCATGTAAGGGGTCAT]  | [ACATGAGCCCAAGTCTTCC]  |
| 492)>EY402658 | [OPF-06] | 351 | [GGGAATTCTATCAATAG]    | [GAATTCCCCCTCTGAGAA]   |
| 493)>EY403057 | [OPZ-17] | 330 | [CCTTCCCAACAGGCAAAG]   | [TGGGAAGGGAAGAATGCC]   |
| 494)>EY403263 | [OPF-10] | 607 | [GGAAGCTTACATGGATAT]   | [AAGCTTCCATCAAGAGTA]   |
| 495)>EY403507 | [OPJ-15] | 340 | [TGTAGCAGTACCAGCAAA]   | [CTGCTACATACTTATCCA]   |
| 496)>EY403695 | [OPF-14] | 201 | [TGCTGCAGTTCCAACGTT]   | [CTGCAGCAGGGAGGATCA]   |
| 497)>EY403747 | [OPI-02] | 297 | [GGAGGAGAGAGAGGAAAAG]  | [TCTCCTCCTCTCTTGAT]    |
| 498)>EY404142 | [OPI-17] | 287 | [GGTGGTGATTCAAGGAGAT]  | [TCACCACCACACTGGTGT]   |
| 499)>EY404157 | [OPP-13] | 254 | [GGAGTGCCACTGCGTGCC]   | [GGCACTCCAAAAACAAC]    |
| 500)>EY404781 | [OPL-10] | 570 | [TGGGAGATTGTGAAGAGA]   | [ATCTCCAGAAAACCTAA]    |
| 501)>EY405716 | [OPF-14] | 319 | [TGCTGCAGGAAGAATCAAG]  | [CTGCAGCAGCAGGAAGAT]   |
| 502)>EY405887 | [OPY-12] | 237 | [AAGCCTGCTTCATAAGCT]   | [GCAGGCTGTAGCGGACA]    |
| 503)>EY406341 | [OPY-12] | 237 | [AAGCCTGCTTCATAAGCT]   | [GCAGGCTGTAGCGGACA]    |

|               |              |                        |                        |
|---------------|--------------|------------------------|------------------------|
| 504)>EY406875 | [OPG-18] 264 | [GGCTCATGTTGGGTCGACA]  | [ACATGAGCCTCACTTCCAC]  |
| 505)>EY407695 | [OPL-20] 235 | [TGGTGGACTTGCATGGGA]   | [GGTCCACCATGGTTGTGTA]  |
| 506)>EY407868 | [OPL-03] 268 | [CCAGCAGCAACAGCCTGT]   | [GCTGCTGGGGTTTCTGTA]   |
| 507)>EY407993 | [OPC-04] 202 | [CCGCATCTTTGTTTCACT]   | [AGATGCGGCGATCCGGTC]   |
| 508)>EY408031 | [OPY-02] 259 | [CATCGCCGGCAATGGGAG]   | [CGGCGATGGCTCGCCGTC]   |
| 509)>EY408183 | [OPL-03] 268 | [CCAGCAGCAACAGCCTGT]   | [GCTGCTGGGGTTTCTGTA]   |
| 510)>EY408246 | [OPR-19] 412 | [CCTCCTCAAAACCCTAAC]   | [ATGAGGAGGCGGGGCTCAC]  |
| 511)>EY408272 | [OPI-12] 274 | [AGAGGGCAAAATTGTTCT]   | [TGCCCTCTTACTTAAGGT]   |
| 512)>EY408390 | [OPL-20] 302 | [TGGTGGACTCCACCCACG]   | [GGTCCACCATGTTGAGTTG]  |
| 513)>EY408521 | [OPL-03] 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 514)>EY408526 | [OPJ-18] 235 | [TGGTCGCACCTTGGCAGA]   | [TGCGACCATCCTCAAGCT]   |
| 515)>EY408585 | [OPE-18] 436 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 516)>EY408592 | [OPF-13] 223 | [GGCTGCAGCTGATGATGT]   | [CTGCAGCCTCCTCTCTTT]   |
| 517)>EY408627 | [OPR-19] 560 | [CCTCCTCATCATGCCTACAA] | [GATGAGGAGGAGTGGTGAT]  |
| 518)>EY408659 | [OPQ-16] 357 | [AGTGCAGCTGTATCTCAA]   | [GCTGCACTTGAGATTGTG]   |
| 519)>EY408714 | [OPE-09] 355 | [CTTACCCACCACAACGA]    | [GGGTGAAGTAGCGCCAT]    |
| 520)>EY408741 | [OPB-03] 235 | [CATCCCCCAGACCAGCA]    | [GGGGGATGCCCTCCTTGT]   |
| 521)>EY408793 | [OPL-03] 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 522)>EY408853 | [OPI-02] 235 | [GGAGGAGAAGGGAGGGGG]   | [CCTCTCCTCCGATCCGGAAC] |
| 523)>EY408913 | [OPK-15] 313 | [CTCCTGCCGCGAGGGCAT]   | [GGCAGGAGGTGCTGCAGC]   |
| 524)>EY408951 | [OPI-09] 433 | [TGGAGAGCACCCGCTGAGC]  | [GCTCTCCATCATGTTTCT]   |
| 525)>EY409146 | [OPL-03] 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 526)>EY409169 | [OPE-18] 436 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 527)>EY409202 | [OPZ-20] 235 | [ACTTTGGCTGACTACAAC]   | [GCCAAAGTGCACCATCC]    |
| 528)>EY409207 | [OPE-07] 597 | [AGATGCAGCCACAGCAGAGC] | [CTGCATCTGAGGGACATC]   |
| 529)>EY409248 | [OPN-08] 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 530)>EY409270 | [OPB-06] 245 | [TGCTCTCGCGAAAATGCT]   | [GCAGAGCATAAGCTTCTT]   |
| 531)>EY409335 | [OPI-02] 296 | [GGAGGAGATGTACGCGGA]   | [TCTCTCCAGATATAATG]    |
| 532)>EY409432 | [OPL-20] 302 | [TGGTGGACTCCACCCACG]   | [GGTCCACCATGTTGAGTTG]  |
| 533)>EY409444 | [OPR-19] 477 | [CCTCCTCATCATGCCTACAA] | [GATGAGGAGGATGTGGTGAT] |
| 534)>EY409481 | [OPL-08] 245 | [AGCAGGTGACAGCGCAGG]   | [CACCTGCTTTCAGAATCG]   |
| 535)>EY409771 | [OPF-04] 271 | [GGTGATCATAAATATCGA]   | [TGATCACCTTGCAGCATT]   |
| 536)>EY409930 | [OPJ-18] 235 | [TGGTCGCACACTGGCTGA]   | [TGCGACCATCCTCAAGTT]   |
| 537)>EY409976 | [OPN-20] 236 | [GGTGCTCCGCCTTAGGGGA]  | [CGGAGCACCAGGTGGAGGG]  |
| 538)>EY410007 | [OPI-17] 286 | [GGTGGTGATTCAAGGAGAT]  | [TCACCACCACACTGGTGT]   |
| 539)>EY410059 | [OPJ-15] 340 | [TGTAGCAGTACCAGCAAA]   | [CTGCTACATACTTATCTA]   |
| 540)>EY410089 | [OPL-15] 427 | [AAGAGAGGATGGCCAAGT]   | [CCTCTCTTCTCGACCTC]    |
| 541)>EY410238 | [OPE-18] 436 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 542)>EY410239 | [OPE-18] 436 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 543)>EY410319 | [OPB-08] 419 | [GTCCACACTCTCGATTCC]   | [GTGTGGACCGCGACGTC]    |
| 544)>EY410345 | [OPN-08] 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 545)>EY410402 | [OPK-15] 313 | [CTCCTGCCGCGAGGGTAT]   | [GGCAGGAGGTGCTGCAGC]   |
| 546)>EY410445 | [OPI-17] 287 | [GGTGGTGATTCAAGGAGAT]  | [TCACCACCACACTGGTGT]   |
| 547)>EY410477 | [OPL-20] 302 | [TGGTGGACTCCACCCACG]   | [GGTCCACCATGTTGAGTTG]  |
| 548)>EY410521 | [OPE-18] 437 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 549)>EY410536 | [OPR-20] 215 | [ACGGCAAGGGCGGCCTTTC]  | [CTTGCCGTGATTTCACGC]   |
| 550)>EY410710 | [OPI-13] 324 | [CTGGGGCTTCTTTGAGAT]   | [CAGCCCCAGGTTCTCACAC]  |
| 551)>EY410735 | [OPR-10] 533 | [CCATTCCCTCTTCTCTAA]   | [GGGGAATGGCGAGGTGGGG]  |
| 552)>EY410745 | [OPI-02] 235 | [GGAGGAGAAGGGAGGGGG]   | [CCTCTCCTCCGATCCGGAAC] |
| 553)>EY410939 | [OPE-18] 436 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 554)>EY410948 | [OPN-08] 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 555)>EY410955 | [OPF-14] 201 | [TGCTGCAGTCCAACGTT]    | [CTGCAGCAGGGAGGATCA]   |
| 556)>EY410964 | [OPE-18] 436 | [GGACTGCATGGTCATTG]    | [TGCAGTCCCACCAGATCC]   |
| 557)>EY410998 | [OPX-05] 309 | [CCTTCCCTATGTCTTTTG]   | [GGGAAAGGAATCCATCCA]   |
| 558)>EY411072 | [OPI-17] 289 | [GGTGGTGAGATTCAAGGA]   | [TCACCACCACACTGGTGT]   |
| 559)>EY411194 | [OPL-03] 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 560)>EY411231 | [OPN-20] 413 | [GGTGCTCCTATTGAAGAT]   | [CGGAGCACCAGTCACAAAT]  |

|      |           |          |     |                        |                        |
|------|-----------|----------|-----|------------------------|------------------------|
| 561) | >EY411277 | [OPY-19] | 203 | [TGAGGGTCCTCGGCCCCA]   | [GACCCTCATTTTTTCGAG]   |
| 562) | >EY411596 | [OPI-02] | 212 | [GGAGGAGAACGTGTACAT]   | [CTCTCCTCTTGAGCTCGA]   |
| 563) | >EY411649 | [OPN-08] | 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 564) | >EY411746 | [OPI-02] | 220 | [GGAGGAGAAGAAAGGTTT]   | [TCTCTCCCTCCATTCC]     |
| 565) | >EY411756 | [OPZ-07] | 250 | [CCAGGAGGTCTCAGGAGC]   | [CCTCTGGCAACTCCAAA]    |
| 566) | >EY411790 | [OPL-03] | 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 567) | >EY411834 | [OPR-19] | 412 | [CCTCCTCAAAACCCTAAC]   | [ATGAGGAGGCGGGGCTCAC]  |
| 568) | >EY411857 | [OPR-19] | 450 | [CCTCCTCATGTTTACTACT]  | [GATGAGGAGGAGGTGGTGAT] |
| 569) | >EY411908 | [OPN-08] | 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 570) | >EY411946 | [OPN-08] | 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 571) | >EY411977 | [OPI-17] | 287 | [GGTGGTGATTCAAGGAGAT]  | [TCACCACCACACTGGTGT]   |
| 572) | >EY412036 | [OPY-12] | 423 | [AAGCCTGCCAAAGGTGGA]   | [GCAGGCTTGCTGAAAGAT]   |
| 573) | >EY412080 | [OPI-17] | 325 | [GGTGGTGAGATCCTCGGA]   | [TCACCACCCTCACACACC]   |
| 574) | >EY412100 | [OPE-20] | 242 | [AACGGTGAATAAGAAGGA]   | [GTCACCGTTATGGTATCAT]  |
| 575) | >EY412161 | [OPR-07] | 201 | [ACTGGCCTGTTGTTGCTTT]  | [AGGCCAGTAGCTTCTGGT]   |
| 576) | >EY412284 | [OPL-20] | 302 | [TGGTGGACTCCACCACG]    | [GGTCCACCATGTTGAGTTG]  |
| 577) | >EY412338 | [OPX-11] | 321 | [GGAGCCTCAGTCTCTGTTGG] | [CTGAGGCTCCTACTCTTACT] |
| 578) | >EY412534 | [OPE-18] | 436 | [GGACTGCATGGTCATTTG]   | [TGCAGTCCCACCAGATCC]   |
| 579) | >EY412647 | [OPN-08] | 366 | [ACCTCAGCATCAGCTGCT]   | [AGCTGAGGTCGATAGGAAT]  |
| 580) | >EY412721 | [OPL-10] | 508 | [TGGGAGATTACTCATATA]   | [CATCTCCCAACCCTGGGAC]  |
| 581) | >EY412740 | [OPI-02] | 277 | [GGAGGAGACCGGCTTTGT]   | [TCTCCTCCTCGAGCTCGA]   |
| 582) | >EY412905 | [OPF-14] | 310 | [TGCTGCAGCTTTGGTACT]   | [CCTGCAGCATCCGCCGCGA]  |
| 583) | >EY412958 | [OPE-18] | 436 | [GGACTGCATGGTCATTTG]   | [TGCAGTCCCACCAGATCC]   |
| 584) | >EY413024 | [OPI-17] | 287 | [GGTGGTGATTCAAGGAGAT]  | [TCACCACCACACTGGTGT]   |
| 585) | >EY413048 | [OPQ-02] | 500 | [TCTGTCCGTGTGGTTTGAT]  | [CCGACAGAAAGTGCATCCA]  |
| 586) | >EY413225 | [OPD-17] | 269 | [TTTCCACACATAATAAC]    | [GTGGGAAAAAGTCCCCA]    |
| 587) | >EY413249 | [OPE-18] | 436 | [GGACTGCATGGTCATTTG]   | [TGCAGTCCCACCAGATCC]   |
| 588) | >EY413253 | [OPQ-02] | 500 | [TCTGTCCGTGTGGTTTGAT]  | [CCGACAGAAAGTGCATCCA]  |
| 589) | >EY413439 | [OPB-10] | 486 | [CTGCTGGGTAGTTACTTC]   | [GTCCCAGCAGACGGCCAACA] |
| 590) | >EY413491 | [OPI-17] | 287 | [GGTGGTGATTCAAGGAGAT]  | [TCACCACCACACTGGTGT]   |
| 591) | >EY413517 | [OPL-03] | 235 | [CCAGCAGCGTCTGATCTT]   | [GCTGCTGGTCCGGCGGAA]   |
| 592) | >EY413546 | [OPI-17] | 289 | [GGTGGTGAGATTCAAGGA]   | [TCACCACCACACTGGTGT]   |
| 593) | >EY413594 | [OPI-02] | 205 | [GGAGGAGACCCAGATTCT]   | [TCTCCTCCCGATATATGC]   |
| 594) | >EY413619 | [OPE-18] | 436 | [GGACTGCATGGTCATTTG]   | [TGCAGTCCCACCAGATCC]   |
| 595) | >GH635938 | [OPF-09] | 319 | [CCAAGCTTATCAGTTATT]   | [AAGCTTGGAGAGATCGTC]   |
| 596) | >GH635980 | [OPR-19] | 775 | [CCTCCTCAAAATGTGCAA]   | [TGAGGAGGCTTTAGAAAA]   |
| 597) | >GH636097 | [OPZ-20] | 470 | [ACTTTGGCCAGCAGTTGC]   | [GCCAAAGTGGTGGGCATG]   |
| 598) | >GH636115 | [OPP-19] | 222 | [GGGAAGGACTACGGCAGGC]  | [TCCTTCCCCACGAGCTGT]   |
| 599) | >GH636200 | [OPF-17] | 282 | [AACCCGGGGGGTTTAAAC]   | [CCCCGGGTTTTTTGATTT]   |
| 600) | >GH636320 | [OPN-08] | 252 | [ACCTCAGCATCCTGCTCT]   | [AGCTGAGGTATGCTCTTTT]  |
| 601) | >GH636362 | [OPC-17] | 331 | [TTCCCCCCCCAAAAAATAA]  | [GGGGGGAACCCAAATTTT]   |
| 602) | >GH636388 | [OPC-17] | 298 | [TTCCCCCGGNGNNNNNGA]   | [TGGGGGGAAGGGGAAATTT]  |
| 603) | >GH636478 | [OPC-17] | 240 | [TTCCCCCCCCGGTTTAAA]   | [TGGGGGGAACCGGGGATTT]  |
| 604) | >GH636518 | [OPC-17] | 203 | [TTCCCCCCCCAAAAAAGCC]  | [TGGGGGGAATTGGGGCANN]  |
| 605) | >GH636519 | [OPX-05] | 380 | [CCTTTCCCCCTTTTTTTC]   | [GGGAAAGGGTGGGTCATT]   |
| 606) | >GH636646 | [OPC-02] | 359 | [GTGAGGCGCCCCAACAAT]   | [CGCCTCACACCTTTTCATT]  |
| 607) | >GH636694 | [OPM-08] | 222 | [TCTGTTCATTTTCCGCA]    | [GGAACAGAGATGTGGCCG]   |
| 608) | >GH636748 | [OPP-03] | 235 | [CTGATACGATTGATAATG]   | [CGTATCAGAGCANNCAAC]   |
| 609) | >GH636752 | [OPB-13] | 453 | [TTCCCCCGGGAATAAATAA]  | [CGGGGGAAGTTTTTTTACC]  |
| 610) | >GH636785 | [OPF-17] | 230 | [AACCCGGGGGGGATCGGG]   | [CCCCGGGTTTTTCCGGCC]   |
| 611) | >GH636799 | [OPC-17] | 321 | [TTCCCCCGGGAATAAATAA]  | [GGGGGGAATTTATTTTGG]   |
| 612) | >GH636920 | [OPJ-07] | 496 | [CCTCTCGATCATGTTATC]   | [TCGAGAGGNNNGAGAAAG]   |
| 613) | >GH636995 | [OPI-02] | 239 | [GGAGGAGAGCCTCATCCTA]  | [TCTCCTCTGTTCTTANN]    |
| 614) | >GH637007 | [OPC-17] | 338 | [TTCCCCCTTTTTCTTTT]    | [GGGGGGAANNNTTGGGAA]   |
| 615) | >GH637018 | [OPC-17] | 341 | [TTCCCCCCCCAAAAAATTTT] | [GGGGGGAAGGGGGGTTT]    |
| 616) | >GH637093 | [OPC-17] | 599 | [TTCCCCCCCCAAAAAATAA]  | [TGGGGGGAATTGGGGCANN]  |
| 617) | >GH637184 | [OPK-04] | 297 | [CCGCCAAAAAATTAACCCA]  | [TTGGGCGGGGGGTCACC]    |

|               |          |     |                        |                        |
|---------------|----------|-----|------------------------|------------------------|
| 618)>GH637218 | [OPB-13] | 356 | [TTCCCCCGGGCCAAGAAC]   | [CGGGGGAAAAAAATTTT]    |
| 619)>GH637247 | [OPC-17] | 384 | [TTCCCCCCCAGAAAAAAA]   | [GGGGGGAAACGGGTGGG]    |
| 620)>GH637286 | [OPC-17] | 387 | [TTCCCCCAGAGGCCCGGGC]  | [TGGGGGGAATTTGGCCCN]   |
| 621)>GH637290 | [OPB-15] | 241 | [GGAGGGTGGAATTGGGAG]   | [CACCTCCCATCGTAGCC]    |
| 622)>GH637317 | [OPC-17] | 246 | [TTCCCCCCCCCAAAATT]    | [GGGGGGAAAAATTTTTC]    |
| 623)>GH637462 | [OPE-07] | 206 | [AGATGCAGTTCACCCAG]    | [CTGCATCTTTGCCATTG]    |
| 624)>GH637474 | [OPC-17] | 242 | [TTCCCCCTGGAAAAAAA]    | [GGGGGGAATTTTGTGA]     |
| 625)>GH637585 | [OPC-17] | 264 | [TTCCCCCCCCAAAAAGA]    | [GGGGGGAAAAATTGCCCC]   |
| 626)>GH637587 | [OPC-17] | 239 | [TTCCCCCCCCTCCAAAAC]   | [GGGGGGAAACCCCGCCC]    |
| 627)>GH637627 | [OPC-17] | 281 | [TTCCCCCAAAAACCAGTT]   | [GGGGGGAAAAATTTAAAT]   |
| 628)>GH637639 | [OPP-19] | 222 | [GGGAAGGACTATGGCAGGC]  | [TCCTTCCCATGAGCTGT]    |
| 629)>GH637757 | [OPR-19] | 391 | [CCTCCTCAAGATCAGCCT]   | [TGAGGAGGTGCACGTGCT]   |
| 630)>GR930411 | [OPC-17] | 200 | [TTCCCCCCCCACGGGGGG]   | [GGGGGGAATTTGGGCGGA]   |
| 631)>GT119125 | [OPY-19] | 235 | [TGAGGGTCTTCACAAAAA]   | [GACCCTCACTGGAAAGAC]   |
| 632)>GT119167 | [OPX-11] | 227 | [GGAGCCTCTGGTTCCCAA]   | [CTGAGGCTCCCTCTCAAGGA] |
| 633)>GT119196 | [OPI-02] | 222 | [GGAGGAGAGGTAGCGGTCGG] | [TCTCCTCCTTCTCCCTC]    |
| 634)>GT119204 | [OPI-02] | 222 | [GGAGGAGAGGTAGCGGTCGG] | [TCTCCTCCTTCTCCCTC]    |
| 635)>GT119243 | [OPI-02] | 204 | [GGAGGAGATCTGTTCCAT]   | [TCTCCTCCANNNTNNNGG]   |
| 636)>GT119507 | [OPI-02] | 297 | [GGAGGAGATTCCGTAAAA]   | [CTCTCCTCTGATCTTTCT]   |
| 637)>GT119640 | [OPA-03] | 236 | [AGTCAGCCAAAGTGCGACC]  | [TGGCTGACTACAACATCCA]  |
| 638)>GT119884 | [OPE-04] | 252 | [GTGACATGGCATTTCATC]   | [GCATGTCACTCGCTGGCAT]  |
| 639)>GT120373 | [OPI-09] | 291 | [TGGAGAGCGTCTTGTTAG]   | [TGCTCTCCATTCTTTTCG]   |
| 640)>GT120387 | [OPY-19] | 235 | [TGAGGGTCTTCACAAAAA]   | [GACCCTCACTGGAAAGAC]   |
| 641)>HQ385987 | [OPI-02] | 268 | [GGAGGAGAAGAAGAAGAA]   | [TCTCCTCCACCTTCATAT]   |

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