

**Table S6.** The primers of pyrosequencing for validation

| Individual | Position     | Forward primer              | Reverse primer               | Sequencing primer         |
|------------|--------------|-----------------------------|------------------------------|---------------------------|
| ACC1-II-1  | 15:80878576  | AGGTTGCTTAAAGAGAAATGGCTCAAA | GCTTGCCAAGACAATATATCTGGAAATC | CTCCAAGTGTGGCATA          |
| ACC1-II-1  | 4:165099831  | TTGGGTCTGTACTTTCCATCAGAT    | AAAACACGAACCCATCCAATA        | ATATCACTACAGTGTTAATTACTAT |
| ACC1-II-1  | 6:85605629   | GGAATGAGAATGTCAAGGAGTGTA    | TGTTCCACTTTTCCTCTGTTGTAG     | GTAGATGCAATACTGTGTGA      |
| ACC1-II-1  | 10:115352263 | CCGTAAAAGGCTTCAGCTCTAA      | AGGAACAGCACTTTCAGCATGTAG     | CTCTAAGCCCCAAC            |
| ACC1-II-1  | 6:154692299  | CCACATATAACGGGCATGTATAGA    | TATCCTTCTTGGCAGCTACTGG       | GGAGTTTGAACAAAATGA        |
| ACC1-II-1  | 18:31333885  | GGAAGCCACTAACACATTTTATACCC  | GTGAGGACGTTTCAGTGAGTATTTATC  | AAGATTTTATCAAAAATATGC     |
| ACC1-II-1  | 15:45732364  | GTTGCCTGTTTGTACTACTTAGCTTT  | TTTTTAAAATAGTATGCCACTCTCC    | CAACTTGCTCATTCACTT        |
| ACC1-II-1  | 6:76955874   | TACCTTCCACCCAATAGGAATAT     | TGTGATAGTCCAAGTGCAAACCTT     | GATAGGTGATAATGAAGCA       |
| ACC1-II-1  | 3:158917393  | TACAGTTAAAGCGACAATCATTGATG  | TTTCTTCTGAGTAGTACCCTCATAACC  | GACCAGCTTTCCTCC           |
| ACC1-II-1  | 8:11688362   | CATAAAAAGAACCTGGTCCGGTAG    | TCTGCAATACTTGGTAAAGGCAACTAA  | AAAAGTGTAAGTTCCTAGC       |
| ACC1-II-1  | 19:4032107   | GGGAGAAGGAAGAGCCCACTG       | GCCTGAAACACCACTTATCTCTGC     | CTCTGCCCCTTGGGAGCCA       |
| ACC1-II-1  | 7:19343958   | GGGAAGACAGAGCAGTAAAAGTTG    | TAAGTACATACCTTGGACAAGCTAACA  | GTAAAGAAAATAAGTAAATGACTC  |
| ACC1-II-1  | 18:70512197  | CAGCACTGAAGCGCAGGTCT        | ATGGCATGTGCGTAATGTGG         | GGAGGAGAAGTGGGTAAC        |
| ACC1-II-1  | 7:147539364  | ACACCCAAGTGAAATACTTTACCA    | TATGAATCTGCAACAAATTGTCTG     | TTGCTTATATGTGTCTCTCA      |
| ACC1-II-1  | 6:123036854  | GGGCTCACAAGATAACCAAACAT     | CAAATCCCCATAATGCACATAGTTAGC  | GAACTTTAACAACTTTTAGATATA  |
| DS1-II-2   | 17:52287119  | CGGATTTGCATAATGTGTATTCA     | GTGATAGTGTTGTGATGCCCTTGT     | AAGAGAAAATATTATGAGGA      |
| DS1-II-2   | 19:55529705  | CCAGGTGCCTACAGTCTGTGTG      | GCACTGCTCCCAGGATGAA          | CTGTGATCCAGGTATTTAAT      |

|          |             |                           |                          |                      |
|----------|-------------|---------------------------|--------------------------|----------------------|
| DS1-II-2 | 19:56343191 | CCATAAGGCTATGATGACGAGTT   | TTACCTTTCTGGCCGATTG      | GAGCTTGGCCTGCC       |
| DS1-II-2 | 20:4339054  | GGGGCAGAATGCAGTCAAG       | TCAACTCCCCTCTTTTCACCTG   | GAGTGAGGATGAAGGTAAC  |
| DS1-II-2 | 4:190179317 | TTTTGAGAAGGGCAAATTTTATGA  | AAAAAATTGGGAGCAATGTGA    | CGCATTGTGTCTATTGAGT  |
| DS1-II-2 | 14:71380614 | GGTGACTAAAACAGGGATTTTCAT  | GTAAAGGGCACAGGCTAATAGATC | AAGTATTATTTTCTGCATCC |
| DS1-II-2 | 16:84073033 | ACGCTCTAAGCTCCCTGAAGACT   | GGCCAGGATGGTCTCGAT       | GGGCCTGACAAATGC      |
| DS1-II-2 | 7:132334892 | CCCTGAGCATCATGCAGTTT      | AATGGGGGAAAGCAGACACTA    | GCAGTTTTCTTTCTAGATA  |
| DS1-II-2 | 13:79932615 | GGTCTGCAAACAAAATTCAAGTTA  | GTGGATCAGAAGTGGAAAGTAACA | TTATTCCTTGTATTTGGT   |
| DS1-II-2 | 2:166848782 | GGCCGAATCCTACGTCTGATC     | AGTAGGAGGCCGATGTTAAACAAC | CCGATGTTAAACAACGC    |
|          |             |                           |                          |                      |
| DS2-I-1  | 1:72008400  | TGCAATGTTTCACCACAACAA     | TGAGGAGCAAAGGTTATCATAGG  | TGCTAAAAACACTTGGCTC  |
| DS2-I-1  | 16:64312186 | GCCCTGACTTTAGCCACTACATA   | GGCTTACAACCTGAGTCATCACAA | CATCCTTCACATGAGATTAA |
| DS2-I-1  | X:68611473  | TCTCTGGGCCCCCTTCAA        | GGTGGGCAGAATGAAATGG      | GGGAGTGGGGATAATTT    |
| DS2-I-1  | 20:60500224 | AGCAGGAGGCATGAGACCC       | AGGAAGGGGTGGCTGCTTCT     | TGGGCTGGGCAGAGA      |
| DS2-I-1  | 22:18619901 | GCTCAGAGATGGAGGGAAATAGG   | CCAACAGGTCAGCATTGTGTAAAC | CAGCCATAACAATGTTC    |
| DS2-I-1  | 2:166854673 | ATTCCCCTTTGGTAGGTGGA ACTC | CAAGGTGAAGAAGGACCCAAAGAT | TTTGGTAGGTGGA ACTC   |
| DS2-I-1  | 6:35755658  | CGCCAAGGTCGAGGTCAA        | CATAGGCGATGCTAAGCCATT    | CCAGGTGTTCTTTGG      |
| DS2-I-1  | 13:89662020 | AGCATTTGAAAATTCCGTTGACT   | AAACACACACAAAACGGCATAT   | ATAATTTTCCAAATTGAGAT |
| DS2-I-1  | 2:79895035  | GGGGTGATTAAACTTTAATGCATG  | TAGAGACGGGGTTTCACCTTGTT  | GGTATAGGACTTCAGAATAA |
| DS2-I-1  | 4:3472325   | GTGGCGTCCGTGAATCAGAA      | GATTTGGCCCAGAGACCACA     | TTGCCACGACGGCTT      |
| DS2-I-1  | 16:48880245 | TGCCAAAGCCATGGTATAGC      | TCTGGAATCTGGGGTTGG       | TACACATTTGGTTTATTGTT |

|         |             |                         |                          |                   |
|---------|-------------|-------------------------|--------------------------|-------------------|
| DS2-I-1 | 18:11785347 | TGCTCCTGGATTCTGCACTCTT  | GTTCTACTTATTGGGGGCTTGGAG | GTGTCCACAAGGCAG   |
| DS2-I-1 | 17:59415198 | GAGACAGAGAAAGCCTCCTTGTT | TGCAGGACTGGTGGAAATATTCA  | TGGTGGAAATATTACAG |

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