Table S1. Information of the 72 candidate SSR markers used in the study

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Marker** | **LG** | **Motif** | **Size** | **Primer sequences (5'-3')** | | **Reference** |
| A604 | 3 | (CT)16(CA)14 | 134-152 | F-GCTCCCGAGGACTTCCAG | R-CCACGACATTTCCCTCTCAG | Gűrcan K, 2010 |
| A605 | 9 | (TC)15(CA)12 | 168-192 | F-CACCCTCAAAACTGTGACGA | R-TGGGTCGCATTCAATAACAC | Gűrcan K, 2010 |
| A613 | 11 | (TC)13(CA)12 | 149-177 | F-CACACGCCTTGTCACTCTTT | R-CCCCTTTCACATGTTTGCTT | Gűrcan K, 2010 |
| A640 | 10 | (CT)15(CA)13 | 354-378 | F-TGCCTCTGCAGTTAGTCATCAAATGTAGG | R-CGCCATATAATTGGGATGCTTGTTG | Gűrcan K, 2010 |
| B604 | 1 | (AG)16 | 193-245 | F-AACAGTCAGCCCCATTTCTG | R-CTTCCCTAATCCCCTCAACC | Gűrcan K, 2010 |
| B606 | 3 | (ACAT)6Ns(AG)16 | 264-280 | F-TCTTGTGGTTTAGCATACTTCTCG | R-GAAGAAAGCAAGAAGAGAGGAGA | Gűrcan K, 2010 |
| B613 | 7 | (CT)16 | 192-216 | F-CGCGTTTTGAGTCCCTTTAG | R-CTACCCGCCTGCGAGAAC | Gűrcan K, 2010 |
| B619 | 3 | (TC)21 | 146-180 | F-AGTCGGCTCCCCTTTTCTC | R-GCGATCTGACCTCATTTTTG | Gűrcan K, 2010 |
| B654 | 8 | (GA)9Ns(GA)(GA)9Ns(GA)20Ns(GA)7 | 276-302 | F-TCGCATGGGTAATTTTCTCAC | R-TCATCATTTGGGTGCTTCAA | Gűrcan K, 2010 |
| B657 | 11 | (AG)15 | 202-234 | F-GAGAGTGCGTCTTCCTCTGG | R-AGCCTCACCTCCAACGAAC | Gűrcan K, 2010 |
| B664 | 10 | (TC)21 | 186-218 | F-CAAAGCCGTCGACAACAG | R-TTTGCATTTGATGCCGATAA | Gűrcan K, 2010 |
| B670 | 8 | (GA)19 | 153-182 | F-CAACACTCACGTTTGGTTGC | R-TCTGTGTTGTTGGGAGTGGA | Gűrcan K, 2010 |
| B686 | 1 | (GA)22 | 201-249 | F-CAGGTTTGGAACCCAGAGAG | R-CGCCTCGCAATATATCCCTAA | Gűrcan K, 2010 |
| B702a | 4 | (CT)13CG(CT)3Ns | 270-306 | F-AGTTGGCGCTCGCTCTCT | R-TAGATGTCCACGGCGAGAAT | Gűrcan K, 2010 |
| B716 | 6 | (CA)4GACAT(GA)13Ns(GGT)4 | 199-221 | F-GAACATTGTCGTATGCGGACT | R-TCTGTTTGTTGCGCATGATT | Gűrcan K, 2010 |
| B719 | 9 | (TC)18 | 283-297 | F-CCGACTCCTTAGCATCCTTG | R-AGCTAGTCTAAACATCAATAGAGCAA | Gűrcan K, 2010 |
| B720 | 5 | (AG)14 | 155-191 | F-CTCTGTGTCGGCTTTCTGGT | R-ATAAACCTCACGCCACACCT | Gűrcan K, 2010 |
| B726 | 8 | (TC)16NNN(TA)9 | 199-237 | F-GGAAATGGCAAATCCGTCTA | R-AACGTTTTGCCTTCCTTGTG | Gűrcan K, 2010 |
| B733 | 7 | (TC)15 | 161-185 | F-CACCCTCTTCACCACCTCAT | R-CATCCCCTGTTGGAGTTTTC | Gűrcan K, 2010 |
| B734 | 10 | (TG)11(GA)10 | 231-261 | F-AAGGTCCTGTTTGTTGGATCTC | R-TGTTTCTTTGACAACCTGCATT | Gűrcan K, 2010 |
| B741 | 5 | (GT)5(GA)12 | 176-194 | F-GTTCACAGGCTGTTGGGTTT | R-CGTGTTGCTCATGTGTTGTG | Gűrcan K, 2010 |
| B751 | 7 | (GA)15 | 137-161 | F-AGCTGGTTCTTCGACATTCC | R-AAACTCAAATAAAACCCCTGCTC | Gűrcan K, 2010 |
| B753 | 7 | (GA)15 | 224-254 | F-AAGGGTTGTTACCCATGCAC | R-GGTGCATTTAGTGCTTCTGG | Gűrcan K, 2010 |
| B758 | 2 | (CT)15 | 152-180 | F-TAATTTAAGCTGCCGTGCAA | R-TGCAAAATTGCATTGCTCAT | Gűrcan K, 2010 |
| B768 | 3 | (TC)14Ns(TGA)5Ns(TGA)7 | 288-308 | F-GTGGCAACGATGCCTTGATA | R-RTCGCATGGTAGGTTCAGTTG | Gűrcan K, 2010 |
| B773 | 8 | (CT)17 | 164-184 | F-ATGGGTTGATTGGGGAACTT | R-GACTCCCAAGCCATACAGGA | Gűrcan K, 2010 |
| B776 | 6 | (GA)17 | 134-148 | F-TGTATGTACACACGGAGAGAGAGA | R-TGAGGGGAAGAGGTTTGATG | Gűrcan K, 2010 |
| B777 | 9 | (GA)15 | 202-224 | F-AGGGAAGGGTGTAGGACGTT | R-TCGTTTTCTCCACATCACCA | Gűrcan K, 2010 |
| B779 | 4 | (CT)18 | 221-247 | F-CGCTCTTGGACTTGGGATAC | R-TTGCAGCTCAGATGGTTCAC | Gűrcan K, 2010 |
| B791 | 3 | (AG)14 | 205-241 | F-CACCAGGACCCTGATACCAT | R-TCCACAATGATTTTGTGAAAAC | Gűrcan K, 2010 |
| B795 | 7 | (TC)8Ns(CT)7Ns(CT)10Ns(TC)5 | 296-332 | F-GACCCACAAACAATAACCTATCTC | R-TGGGCATCATCCAGGTCTA | Gűrcan K, 2010 |
| B010 | 3 | (GA),6 | 207-223 | F-AGCTTCCAAATCACACATTACC | R-GAAGAGCATCCGTATGATTCAG | Gökirmak T, 2006 |
| B020 | 7 | (GA)19 | 258-294 | F-GGGAAAATACTCCAAATCGCT | R-TCACCGAGCCGTCATAATC | Gökirmak T, 2006 |
| B029b | 1 | (GA)3 | 115-141 | F-CAATTTACACCTCAGGGAAGAG | R-AAGTTCACCCAAGAAATCCAC | Gökirmak T, 2006 |
| B105 | 10 | (GA)16 | 125-163 | F-AAAGGAGCAAGCATGTTAGG | R-GTTTGTACGGATGATCCACTGAG | Gökirmak T, 2006 |
| B106 | 11 | (AG)17AA(AG)6 | 156-181 | F-CCAATCGCCAATGAATCATC | R-CCCTTTCCAAACTGGGCAT | Gökirmak T, 2006 |
| B109 | 9 | (GA)21 | 149-174 | F-AATCCAAGCCTTTTCACTACC | R-ACCCATCAAGTTCACCAATC | Gökirmak T, 2006 |
| B502 | 10 | （GA)1,GC(GA)2,GC(GA)14 | 183-211 | F-CTCATGACTGCCCATTTCTCG | R-AGGCATGCAGGCTTCACAC | Gökirmak T, 2006 |
| B504 | 2 | (CT)18 | 161-187 | F-GCCATCTCCATTTCCCAAC | R-CGGAATGGTTTTCTGCTTCAG | Gökirmak T, 2006 |
| BR215 | 8 | (CGC) 5 | 120-135 | F-TGAAATCTTCACCTCTTAAAAGATCC | R-GGAATCTGAGCTGCCAAGTC | Peterschmidt B, 2013 |
| BR270 | 1 | (CTG)6 | 87-99 | F-AGCACCTCCTCTGCTTCCTA | R-TTCCTCCTCTGCTCCAAATG | Peterschmidt B, 2013 |
| BR322 | 8 | (ACT)7 | 99-108 | F-TCTCTTCCTTGCCACCTCAG | R-AAGATGGGGTTCGAGGAGAC | Peterschmidt B, 2013 |
| BR352 | 10 | (GAA)5 | 109-118 | F-AGAAAGCAAGATGGCAGACC | R-CGTTGGCTTACCTGGATGAC | Peterschmidt B, 2013 |
| BR359 | 4 | (TCT)5 | 381-406 | F-TACCTAACACAACAGCCACCAC | R-TCAGAATGGTAATTGCACCTTG | Peterschmidt B, 2013 |
| BR415 | 5 | (GAA)7 | 248-260 | F-GATTGGAAGAAGGCAAAGAATG | R-TAAAACCTTGATGGGTCGTCTT | Peterschmidt B, 2013 |
| BR423 | 1 | (GAA)6 | 103-127 | F-ACAAACCAAAGGGAGTGTGG | R-CAAGCTTTCCATCATCGTCA | Peterschmidt B, 2013 |
| BR483 | 11 | (AG)12 | 282-318 | F-TTACCACCACTTTTCAACACCA | R-GGTACATCAAAGAAGGGAGCAC | Peterschmidt B, 2013 |
| BR485 | 3 | (AG)9 | 127-135 | F-CGGAAAGTGGACAGTGGATT | R-ATCCGCAAAACCAAAACAAA | Peterschmidt B, 2013 |
| GB332 | 9 | (CAG)5 | 275-292 | F-CCCTTCTACACGCAACACAA | R-GGGCACTCTCACCAAACAAT | Bhattarai G, 2015 |
| GB378 | 4 | (CCT)7 | 191-211 | F-GCCTCTAAAGTTGGTTCTTTGC | R-AAGTCTCTTATTTGGGTGTGGG | Bhattarai G, 2015 |
| GB395 | 2 | (CTC)6 | 370-388 | F-TGTTATTTTCTCATCTGCGTGG | R-CTCTGATCGAACCAACCATGT | Bhattarai G, 2015 |
| GB410 | 4 | (ATCC)4ag(CCAT)4 | 160-190 | F-CCTCTACTATCTAGGAAGCCCCA | R-ACTTTGGCCTTTTGGACTTTG | Bhattarai G, 2015 |
| GB423 | 6 | (GAGC)5 | 283-297 | F-GTCAAAGCTGAGGAATGGTTTT | R-TCGGTTGTCACTTGGTCAATTA | Bhattarai G, 2015 |
| GB437 | 4 | (GTGA)7 | 334-340 | F-GCTTCTTGGAGGGTTCTGC | R-GCCAGAGCGTAAGAGAGAGAGA | Bhattarai G, 2015 |
| GB444 | 1 | (GTCT)5 | 310-330 | F-GCAGAAGCAAACAAAACTATCG | R-TGTCAGGGTTAAGGACTGTTCA | Bhattarai G, 2015 |
| GB627 | 11 | (CTCTTC)4 | 348-360 | F-GCAGCAGGTTGTGTCCACT | R-ATTTGCGTCTTCGTAAGTTGGT | Bhattarai G, 2015 |
| GB673 | 5 | (TCACCA)5 | 339-377 | F-CAACAATGGGAATGTTGCAG | R-GGGCCAATAGCAAAAGTTCA | Bhattarai G, 2015 |
| GB808 | 4 | (CTG)7 | 362-374 | F-GCATAAACCACTCCAACTCCTC | R-TTTGCTATCCCTACTCAGCTCC | Bhattarai G, 2015 |
| GB818 | 1 | (GAG)5 | 129-144 | F-GAAGTTGGGTTGGAAGCAGTT | R-CGTCCTCTGCACACTCTCATAC | Bhattarai G, 2015 |
| GB831 | 7 | (GAG)7 | 127-145 | F-TGGCCCTCGTAGAATAAGATTG | R-CAACCAAGAAATGACCCTCTTC | Bhattarai G, 2015 |
| GB867 | 11 | (GGA)6 | 286-301 | F-CTTGGCAAAGCTACCCTCAC | R-ACGCGTTCTCTCCTAACGAA | Bhattarai G, 2015 |
| GB875 | 5 | (GGA)9 | 325-349 | F-ATGATGATGAGGAGGAGGAGAA | R-CAAAATCAGGCATACAGAACCA | Bhattarai G, 2015 |
| GB878 | 2 | (GGT)10 | 273-297 | F-ATCAACGCACTCCACATGAA | R-ACGCCAAGAAAGAAGACAGC | Bhattarai G, 2015 |
| KG801 | 6 | (CT)11TT(CT)4 | 329-361 | F-CCTCACCACCGATACCTC | R-CACCTGAACGACTCAATCT | Gűrcan K, 2010 |
| KG811 | 2 | (GA)17 | 240-278 | F-GAACAACTGAAGACAGCAAAG | R-AAGGCGGCACTCGCTCAC | Gűrcan K, 2010 |
| KG817 | 2 | (AG)11 | 351-371 | F-AAAGTTAGAAGGGTCATTTGT | R-CAAGGTGGAGATTGTTGG | Gűrcan K, 2010 |
| KG819 | 5 | (AG)11Ns(AG)10 | 199-217 | F-ATAAAGAGGAAGGACCACAGA | R-CCACACACACACACATAACAA | Gűrcan K, 2010 |
| KG823 | 8 | (GA)12 | 157-163 | F-TGTGTGTGTTTCTTGCGTTTGTATGTG | R-GGAAGTGTAACAGCACTGCAACTGGT | Gűrcan K, 2010 |
| KG845 | 9 | (TC)8NS(GT)8 | 212-246 | F-TATAGATGCCATGGGTGCAAACAAAA | R-ACTATCACTTGACCCACCTTCCCTCTTT | Gűrcan K, 2010 |
| LG682 | 6 | (AG)11 | 376-434 | F-AGCATACCTGAGACGGAGAGAG | R-TGATCTAAGTGGGCCTTGATTT | Gűrcan K, 2010 |
| Z72433 | 10 | (CA)17T(AT)16 | 169-187 | F-GCCTGGAACCATCAAGAAGA | R-TCCACCTCATCAACCCTCTC | Gűrcan K, 2010 |
| GK6.63 | 6 | (GA)18 | 76-116 | F-GCAAACTTCCAGAAAACCAA | R-AATGTTCGTAGGACAACTGCAT | Gűrcan K, 2010 |

**Table S2.** Grouping information for the multiplex PCR and capillary electrophoresis

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Group code** | **Marker** | **Size range** | **Tm** | **Color** |  | **Marker** | **Size range** | **Tm** | **Color** |
| Group 1 | BR215 | 120-135 | 60 | Fam |  | B619 | 146-180 | 60 | Hex |
| B716 | 199-221 | 57 | Fam |  | B734 | 231-261 | 57 | Hex |
| GB875 | 325-349 | 63 | Fam |  | GB673 | 339-377 | 63 | Hex |
| Group 2 | B751 | 137-161 | 63 | Fam |  | BR423 | 103-127 | 63 | Hex |
| KG811 | 240-278 | 60 | Fam |  | B726 | 199-237 | 60 | Hex |
| BR359 | 381-406 | 63 | Fam |  | BR483 | 282-318 | 63 | Hex |
| Group 3 | GK6.63 | 76-116 | 60 | Fam |  | GB818 | 129-144 | 60 | Hex |
| B720 | 155-191 | 63 | Fam |  | B657 | 202-234 | 63 | Hex |
| B779 | 221-247 | 60 | Fam |  | GB867 | 286-301 | 60 | Hex |
| Group 4 | B733 | 161-185 | 60 | Fam |  | B758 | 152-180 | 60 | Hex |
| GB423 | 283-297 | 63 | Fam |  | KG845 | 212-246 | 63 | Hex |
| KG817 | 351-377 | 60 | Fam |  | B795 | 296-332 | 60 | Hex |
| Group 5 | B791 | 205-241 | 60 | Fam |  | B777 | 202-224 | 60 | Hex |
| B654 | 276-302 | 60 | Fam |  | B606 | 264-280 | 60 | Hex |
| A640 | 354-378 | 63 | Fam |  |  |  |  |  |
| Group 6 | B029b | 115-141 | 60 | Fam |  | B664 | 186-218 | 60 | Hex |
| B613 | 192-216 | 60 | Fam |  | GB332 | 275-292 | 60 | Hex |
| B702a | 270-306 | 60 | Fam |  |  |  |  |  |
| Group 7 | GB410 | 160-190 | 60 | Fam |  | B504 | 161-187 | 60 | Hex |
| GB808 | 362-374 | 60 | Fam |  | GB437 | 334-340 | 60 | Hex |