|  |  |  |  |
| --- | --- | --- | --- |
| **S/N** | **Primer name** | **5' Forward 3'** | **5' Reverse 3'** |
| 1 | SSR-7067 | ATTCGCCCCTTTTCTCACTT | GCAGAGGTGGTAGCAGAAGG |
| 2 | SSR-6915 | GCACCATATCCCTCCAGCTT | GCTCATGATTCAAGTCAAGGACC |
| 3 | SSR-7056 | CGCTCCTCTTCCTTTTGTTCT | AGAAAAGGGCATGTTCGTTG |
| 4 | SSR-6623 | GCACTTCAAAGGAGACCACAC | CCATATTCCAAATCATCTTAACC |
| 5 | SSR-6934 | GATGTGGTGAATTGCATGCAA | GATCTCAAGATGGGGTGGGAA |
| 6 | SSR-7000 | GAAGCTTAATCCACAGAATCTACGC | GGAAACTGTTTGCACTTTTATCCCA |
| 7 | SSR-6694 | CTAGAGATGCCTTAACTCGG | CGAAACTTAGCGTACAGAGGTTC |
| 8 | SSR-6466 | CAGCTTCTCTGCTAGCAACAATAA | GCAAATTTCACTTTCAACATTTCA |
| 9 | SSR-6744 | GACAGACAGACACCAGGAAAG | TGAGCTTGTCGAGACCACAG |
| 10 | SSR-6577 | GAACTTGATAGGATCCTAGA | TTCTGGTATGCACTGAGGGA |
| 11 | SSR-6924 | GATCACCTCCCACACCTCAG | TAGCAGTTTCCCACCAGCTT |
| 12 | SSR-7013 | GAATCTGGGCTCTTATGTGTTC | GACTACACGCCATGCATAGTAC |
| 13 | SSR-6790 | ACGACGTTGTAAAACCTTACCTTCACCTATAGAC | CATTAAGTTCCCATTACACTGGGGTCGCCTAAGGAAG |
| 14 | SSR-7009 | GCCATGGTTGAAATTTGCATC | GACAGGCCATGAAAGCAATAC |
| 15 | SSR-6972 | GAGTGCCACGCAAAACTACTG | GTGTGCAAGTCGATTTCCATG |
| 16 | SSR-7053 | TGGCAAGATCTGATTGGTGA | GCGGGATTCTATTCCAGTGA |
| 17 | SSR-7040 | CCGATTGTGCCTTTATGTCC | CGGCTTCTTCCACTGATGAT |
| 18 | SSR-6982 | GCATGAGTGTGTAACCTGTGAC | GACGGCACATTGAAACCACTTG |
| 19 | SSR-6701 | GCCCTCGCCAATGATTCTGAG | GCCTTTATAGAACCCAGCATACC |
| 20 | SSR-6294 | GTTATCAGATCTGGTCAGATGC | GAAGAAACCACCCGACCAT |
| 21 | SSR-6225 | CTCAAGCTTGGTTGAGATGAAA | ATATCGGGCGCACTTTTGTA |
| 22 | SSR-6603 | GAGAACTTCACGCACAATAG | CGCGGTAGCATGATTGAATTTTG |
| 23 | SSR-6663 | CCGAATTCCTTCCTCCAAC | GAGGGAAGAGAAGAAGG |
| 24 | SSR-6369 | CCTCAACACCTTTTGGAGGA | CAAATGCACCTCCTGTGCTA |
| 25 | SSR-6277 | CACCCCCGTACACACACAC | CACTTAAATTTTCACCAGGCATT |
| 26 | SSR-6324 | CAGCAGGGGTTGTTTCAGAT | CAGGTTGATGAGGAACCAAGA |
| 27 | SSR-6673 | GAAAAGTGAACCGCAGAATAACC | CAGACATTGAAGTGAGCC |
| 28 | SSR-6917 | AGCAAAAGCCTCCATCACTT | AGAAAACAGGAGGGAGATGA |
| 29 | SSR-6973 | GTTGAGACCAAACATTGTTCGC | GCGTAAGCAAGTTAATCTCTAG |
| 30 | SSR-6218 | GTGGAAGGAATGGGTCCAG | AGGAAATTTGCATTCCCTTGT |
| 31 | SSR-6965 | GCATTCAGCTACGATGTGTTC | GGCACTTTGTAAAAGACAGGC |
| 32 | SSR-6327 | ACGAAACGATGTTAATGCTGATT | AAAAAGATTTGATGTGATCTATGATGTT |
| 33 | SSR-6429 | TTTGGTTCAAAACTATTGTGATTTT | AAGACCCTTGAGCCACTTCA |
| 34 | SSR-6807 | GAACTATTATACAATCATGCACGA | GTAGCTTACTTCAATGATTAG |
| 35 | SSR-6947 | CAGAAATGGAATGCAAGCAGC | AGAGCATAAGGACATGAACAC |
| 36 | SSR-6641 | CATAAGCAAAAAACTCTAAACTCTG | GGCACTCCAATCAGAGCTG |
| 37 | SSR-6922 | GAAGGCCACACAAGAGACCA | TTTGATGTTTTCATGTTCTTCTGTT |
| 38 | SSR-6743 | TCTCTCCCTCTTTCATCCCC | CTTCCCGAAACTTCCTTAGG |
| 39 | SSR-6733 | CATGTCCAAGATGTATGTAGG | CCTGGGATTGCGGGATTGTT |
| 40 | SSR-6950 | TGACCTTTGAAGATCGAGACA | CTATGATCCTACCGCTGAGTA |
| 41 | SSR-6375 | GCTCGGATATGGTCCTGAAA | TCAGTGTCAGCACCATACCC |
| 42 | SSR-6994 | GAGTTTATTCACTGCAGCATC | GTAGGGCTCCAACTGATATCC |
| 43 | SSR-6469 | CATAATGTCACAGAGGTGGAAAA | TCTTTCCTTCCTTTTCACCAA |
| 44 | SSR-7005 | GTTTGATCCTACCTGGTGCCAT | GCTCATGATTCAAGTCAAGGAC |
| 45 | SSR-6944 | CACCTGCTTCTGTACTGTTAA | TTGTAAGTTAGCCGGGCAGTA |
| 46 | SSR-6906 | GGACATTTAGGATTGGGTGG | CAAGAATGTCTGAAACTAATATGC |
| 47 | SSR-6639 | CTGTATTATTTTCCAGTTTCTCCC | GACAAGACAGGGGAACGAAC |
| 48 | SSR-6547 | AAACTGACACTTGAACACGA | CTCATGCAGAGTTCAAGATC |
| 49 | SSR-6983 | TTGTGGCGATTCAAAACATC | CCTCCAAATTGTCACCACACT |
| 50 | SSR-6513 | CATGGAAAAGATGCTGTGGA | AACGCAACCAAAGCCTTTTA |
| 51 | SSR-6624 | CATATCAATCACTTCTGTGCC | CGAAATCCAGGCTTATCCAC |
| 52 | SSR-6192 | AACGGGTCCTAAACGAATGA | ATCCTTGAACTCCGTGTTGC |
| 53 | SSR-6914 | GAGCCGGAATACAGGATCATG | GATGCAGGCTATAACCGCGG |
| 54 | SSR-6360 | TTTTCAATCCTCCCCTTGTC | TGTAGTTAAAATCAGAGACTTACAGG |
| 55 | SSR-6242 | TGTTGACTGGCAGAGGTTGA | TTCCACGAATCATCGACAGA |
| 56 | SSR-6268 | GCAAAGGGATCACCAAACAT | TCGTTCAGTTGAGCCAC |
| 57 | SSR-7061 | TGCGCTTGAACTTCTCCTTT | CACCCTCCATTCTCAAACCA |
| 58 | SSR-6516 | TGTTTAGATATGAAACACAATTT | CCTCGGATTGTTTCCTTCTG |
| 59 | SSR-7045 | CTTGGGGTGATGATGAAACC | AGGGGTGAAAAGTTGTCTTGC |
| 60 | SSR-6592 | CAGGCATGCATTCATCTTTCCC | GAAATTAATTAGGAAAAATAACAAGCCAC |
| 61 | SSR-6717 | CCTCACTCTGAATTGCATAC | CTGAATCACCCAATTTGCTTCC |
| 62 | SSR-7069 | CATTGGAAAAACACGCACTG | TGGTGACGAGAGTGCTTCAG |
| 63 | SSR-6609 | GGGTTCAAGTGGGGAAG | CTTACATTCCTCCCTCTCCC |
| 64 | SSR-6348 | CCTCTTGCTTTGCCTTTGTC | CCCCTTTTTATGACATGAAGC |
| 65 | SSR-6686 | GTGTCCTTCCATTTTTGATGTG | GACAAGAAAAGGGTTCCATAACTG |
| 66 | SSR-6662 | GATAACTAAGTTGAGGTTTGG | GTTTGGATGGTAAGTGCTTAAC |
| 67 | SSR-6240 | TTCAATGTGGGAGGATGAGA | GGTTCCGGATTCAATTTTCC |
| 68 | SSR-6998 | GAATCTCTGTGGTTGCTCTTC | GTATGCCTTTATAGAACCCAG |
| 69 | SSR-6188 | ACCAGGTGCAATGCTTCTCT | CCACACCCTGTTCCGTACTC |
| 70 | SSR-7001 | GAATCACATAAGAGGAGCACAA | GATGAAACCGACATGAAGAAGC |
| 71 | SSR-6228 | CACGTTTTCCTTTCCTCACC | TACAATGAAATGGGCTGCAC |
| 72 | SSR-6171 | ATTCGATCCAACCCAATGAC | AGCGAAGGCATGTTCGTAAG |
| 73 | SSR-6243 | GTAGGGAGTTGGCCACGATA | CAACCGATGTAAAAAGTGGACA |
| 74 | SSR-6921 | TCCTCCTGATTGGACCTCAC | TCCTCATCACAATGTTCATCATC |
| 75 | SSR-6302 | TGGAGGCATAAAAATGACACCT | AAGCTGATTGTGGAACCATTG |
| 76 | SSR-6604 | GGACCATCTTACATAACTCAATG | CCACATTCCACCACTCTCC |
| 77 | SSR-6720 | TGGTGGGTGGATTGCTGACA | GGCATTCCACTAAGAACATC |
| 78 | SSR-7079 | GCACGGGCATGTACTGAAAA | GTTTTTGGTGATCTGGACAT |
| 79 | SSR-6607 | GAGAGTATCAAATGCTGTGGC | CAATGAACTCAGACATCTCAC |
| 80 | SSR-7078 | GATGTGTTACAGTTTTTCAC | CAGATGAACTCCCTGCAGCT |
| 81 | SSR-6313 | ACGGATTCAGAATTGCCATC | GCAGATGAGTTATCTTGCAGTGTT |
| 82 | SSR-7072 | GGGTTGTCCCTGGTAAGGTT | AGTTTGTCGGTCCATTCTGC |
| 83 | SSR-6939 | CGCACGTTATACACTCTTTCT | CCAATGTCAAGAGCCTGCAAG |
| 84 | SSR-6314 | TGGAGGCATAAAAATGACACCT | TGAAGCTGATTGTGGAACCAT |
| 85 | SSR-6856 | GGATACATGTGCTTAAGTGT | CTTCGTGGGTGGTTACATTC |
| 86 | SSR-6705 | GCTCACCTACGTGTGTTCGATC | GCAAGTGGATGTGGTGATCTC |
| 87 | SSR-6354 | CGAAAATTCACAGAGATGCAG | CAGTCTAACGAAGAACTGGGCTA |
| 88 | SSR-6990 | GGATCTGGGTATGTTTTGAGC | GACACACGAAGGTTCTGGACA |
| 89 | SSR-6372 | AACAGGTGTCAGTCATCCGTTA | ATTGGCATGTCAAACATTCG |
| 90 | SSR-7060 | AAAAGGATTTTTGGGGTGGA | GAGAGTGGAAGCCGTTGAAA |
| 91 | SSR-6391 | TTTCAAAAGATCAACTACACTC | TGGTGAACAAAATTTTACCTTGA |
| 92 | SSR-6810 | GACCATCCAAGACTAAGACACTGA | AAAGATTATGCTCTATTCACAGA |
| 93 | SSR-6597 | GTGTCTTCTCTCATCATAACG | GGTTAAGCTTGATTAGGAATG |
| 94 | SSR-6312 | ACTACACCGATGAAAGCAACTG | TTCCAAAATAGTTCACAACTTACAATG |
| 95 | SSR-7023 | GGTTCTCATTGAAGGTAAAGC | GGGCCTCCAGAATTTGATTAT |
| 96 | SSR-6920 | TGCTTTGGCAATAAAAAGTAAA | ATACCGAACCGACAATGAGC |
| 97 | SSR-6697 | CACTCCACTTGCACCATTGTTG | GTGATTCCATTCAAGTGTAT |
| 98 | SSR-6927 | CGAGAAAGCTGCGGCCCTTAC | CGAAGTCGAGGATTTTGATGG |
| 99 | SSR-6353 | TCATGGGTTAAATTTGCTTCAA | AAACCATGTGGTTGTTGCAC |
| 100 | SSR-6395 | CAATTAATGATCGGACAAGAGTG | GCATGAACACTACTGTGAGCAA |
| 101 | VM31 | CGCTCTTCGTTGATGGTTATG | GAAAAAGGGAGGAACAAGCACAAC |
| 102 | SSR-6730 | TGCTTCCTCGTCTGCCCTCC | GAGGGCAAAGCAAGGCGAAA |
| 103 | SSR-7008 | GAAGATACCAAGATGCCCCTAAAAC | GTATATGTTAGCTAGCCACGTATGA |
| 104 | SSR-6916 | GCCCCTAAAACCTGCAACAAC | GTTAGCTAGCCACGTATGAAG |
| 105 | SSR-6919 | AGCAAAAGCCTCCATCACTT | AGAAAACAGGAGGGAGATGA |
| 106 | SSR-7004 | GGCTCTGAGAAATTTATGATCC | GCCTGTTTTTTGTTGCTATTGC |
| 107 | SSR-6979 | GAAACGAACCTGAAAATAGTCGGC | GCATTCTTGATGTGTCTCTTACCT |
| 108 | SSR-6964 | GAAGAGCGGTAAAACCAACAA | ATGTCAAGAGCCTGCAAGGAC |
| 109 | SSR-6331 | TGGTGCTCAACTTCCTCACTT | GGCACTCCTCCAGGTGACTA |
| 110 | SSR-7015 | GTGTCAAATTAATGGAGCAGC | GGGTGGCTTACTGAAAGTTCC |
| 111 | SSR-6918 | GCAGAAGCGAAATCTCCTAGAAAGC | GAAAACAATGAACAAGGTGAGGTTC |
| 112 | SSR-7025 | GTTTCTCTAGAGGTGCATCAAT | GTACCTGCAACCACAAGTAATG |
| 113 | SSR-7027 | GAATCTGGGCTCTTATGTGTTC | GACTACACGCCATGCATAGTAC |
| 114 | VM37 | TGTCCGCGTTCTATAAATCAGC | CGAGGATGAAGTAACAGATGATC |
| 115 | VuUGM25 | AGGGATGAGTTCCTTCAACG | AAGAAAGTGGTGAGGGCACAG |
| 116 | SSR-6436 | CAGAATCCTTGTGAACCTG | TTTCGCAATATGCCCTTTTC |
| 117 | Bmd-17 | GTTAGATCCCGCCCAATAGTC | AGATAGGAAGGGCGTGGTTT |
| 118 | VM54 | CACACACACACATAGATATAG | TCCATCACTGATCACCTGTT |
| 119 | VM71 | TCGTGGCAGAGAATCAAAGACAC | TGGGTGGAGGCAAAAACAAAAC |
| 120 | VM74 | CTGCTACACCTTCCATCATTC | CCTTTGCTGTGTGGTGGTTT |

Table 2: List of cowpea SSR primers used to screen for polymorphism in four set of bi parental cross from six parent and 77 progenies of Africa yam bean

**Table 3. Summary of SSR alleles for identification of true to type in 77 progenies from four set of bi parental cross of Africa yam bean**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Accession no** | **SSR-6701** | | **SSR-6623** | | **SSR-6466** | | **SSR-6577** | | **SSR-6924** | | **SSR-6982** | | **SSR-6294** | | **SSR-6225** | | **SSR-6171** | | **SSR-6730** | |
|  | **Allele** | | **Allele** | | **Allele** | | **Allele** | | **Allele** | | **Allele** | | **Allele** | | **Allele** | | **Allele** | | **Allele** | |
|  | **400** | **300** | **350** | **450** | **150** | **400** | **350** | **400** | **325** | **300** | **300** | **350** | **300** | **350** | **350** | **400** | **150** | **350** | **300** | **350** |
| **TSs 274 x TSs 78(1)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(2)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(3)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(4)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(5)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(6)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(7)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(8)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(9)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(10)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(11)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(12)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(13)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(14)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(15)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(16)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(17)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(18)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(19)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 274 x TSs 78(20)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(21)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(22)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(23)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(24)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(25)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(26)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(27)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 274 x TSs 78(28)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(1)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(2)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(3)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(4)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(5)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(6)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 363 x TSs 111(7)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(1)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(2)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(3)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(4)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(5)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(6)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 96 x TSs 111(7)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(8)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 96 x TSs 111(9)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 96 x TSs 111(10)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(11)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(12)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(13)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(14)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(15)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 96 x TSs 111(16)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **TSs 96 x TSs 111(17)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(18)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(19)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(20)** | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| **TSs 96 x TSs 111(21)** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(1) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(2) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(3) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(4) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(5) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(6) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(7) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(8) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(9) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(10) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(11) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(12) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(13) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(14) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(15) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(16) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(17) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(18) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(19) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TSs 96 x TSs 417(20) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| TSs 96 x TSs 417(21) | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Freq |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Presence of allele (+) or absence of allele (-)