

附表 1 成功设计的 51 个 KASP 引物序列

| Schedule 1 Sequences of 51 KASP markers successfully designed | | |
|---|-----------------------------|--|
| 名称 Name | 变异类 型 Alleles type | 引物序列 Sequence of primer (5'-3') |
| VIT_1_729514 | A/G | F: GAAGGTGACCAAGTTCATGCTGCTGAAGGTTTCTTGAAAAAGTACTGAT F: GAAGGTCGGAGTCAACGGATTCTGAAGGTTTCTTGAAAAAGTACTGAC R: CACAGGTTGGACAAGCAAAGGGAATT |
| VIT_1_5948674 | A/G | F: GAAGGTGACCAAGTTCATGCTATGGTTGAGGAAAGAATATTGGAAGCT F: GAAGGTCGGAGTCAACGGATTGGTTGAGGAAAGAATATTGGAAGCC R: CCGCTAGTCTTTCTAACCATGAGCTA |
| VIT_1_22828604 | A/T | F: GAAGGTGACCAAGTTCATGCTCTACTATTATCTCTCTCGCTTATTGCTA F: GAAGGTCGGAGTCAACGGATTCTACTATTATCTCTCTCGCTTATTGCTT R: GGCAAATCCCAAAGAACTATGAATGGAA |
| VIT_2_5141894 | A/G | F: GAAGGTGACCAAGTTCATGCTTGCGGCAAGAAGGTCCCAACT F: GAAGGTCGGAGTCAACGGATTGCGGCAAGAAGGTCCCAACC R: GTAGTGAGAACTAGAGCGGAGAACTAT |
| VIT_2_6474327 | T/A | F: GAAGGTGACCAAGTTCATGCTCTCACCATTAATTGGGGTGAAGATTAA F: GAAGGTCGGAGTCAACGGATTCTCACCATTAATTGGGGTGAAGATTAT R: AAAGTAATCTCCATTTTGGTGTGATAACCTT |
| VIT_2_17198115 | G/C | F: GAAGGTGACCAAGTTCATGCTTCCTCCGCTTCTCCGCCC F: GAAGGTCGGAGTCAACGGATTTCTCCGCTTCTCCGCCC R: AAAATCTTGCGGGCGTAGTCGAGAT |
| VIT_3_1348328 | C/T | F: GAAGGTGACCAAGTTCATGCTGATAAGACGGAGTGGCTGGAC F: GAAGGTCGGAGTCAACGGATTGGATAAGACGGAGTGGCTGGAT R: CCTGGCCGAACACCACGTGCTT |
| VIT_3_3676120 | A/C | F: GAAGGTGACCAAGTTCATGCTAATTTAGCCAATTTCTATCTTTTGCCGTTT F: GAAGGTCGGAGTCAACGGATTTTGTAGCCAATTTCTATCTTTTGCCGTTG R: ATCTACAAGGCAGGAAGGAAAGAGTTAT |
| VIT_3_5724485 | T/C | F: GAAGGTGACCAAGTTCATGCTCCCTTTTGGTGTAACATCCTTCCA F: GAAGGTCGGAGTCAACGGATTCTTTTGGTGTAACATCCTTCCG R: GATAGGAATAGCCTCGTAGAATTTTATGTAAAA |
| VIT_4_680574 | C/T | F: GAAGGTGACCAAGTTCATGCTGGAGCTTTGATCCTGAAACCGAG F: GAAGGTCGGAGTCAACGGATTTAGGAGCTTTGATCCTGAAACCGAA R: GCGTGCAGCTATCTCTTGAAGCAAAAA |
| VIT_4_6409234 | C/T | F: GAAGGTGACCAAGTTCATGCTATTATCCCAAAGGGAAAAATAAAAACTTTCC F: GAAGGTCGGAGTCAACGGATTGATTATCCCAAAGGGAAAAATAAAAACTTTCT R: GTTCTCACAGGACAAAGCATCTTGTT |
| VIT_4_21849155 | A/G | F: GAAGGTGACCAAGTTCATGCTCACTGGTAATAGATAGAATTAAACACATCT F: GAAGGTCGGAGTCAACGGATTACTGGTAATAGATAGAATTAAACACATCC R: CTTCTAGGTGGAAGCAGCTGTATTAA |
| VIT_5_1785979 | C/T | F: GAAGGTGACCAAGTTCATGCTGGTCCCTCACCTATTACTCCAG |

| | | |
|----------------|-----|---|
| | | F: GAAGGTCGGAGTCAACGGATTTCGGTCCCTCACCTATTACTCCAA |
| | | R: TTTCGGACATGGAAAGCTTGAGTTTCTT |
| VIT_5_5773320 | C/T | F: GAAGGTGACCAAGTTCATGCTGGCTGTATCCTGTCTTGAAGCTC |
| | | F: GAAGGTCGGAGTCAACGGATTTGGCTGTATCCTGTCTTGAAGCTT |
| | | R: GATCCAAGGTCACGAGCTGTTTATGAT |
| VIT_5_6744629 | A/G | F: GAAGGTGACCAAGTTCATGCTTGAGTCAATCTCGCCGAATATGAGT |
| | | F: GAAGGTCGGAGTCAACGGATTAGTCAATCTCGCCGAATATGAGC |
| | | R: AAACCTCAAGATTGGACAGCAATATCCATATT |
| VIT_6_327200 | A/G | F: GAAGGTGACCAAGTTCATGCTAAAAGCCTTTGGAGCATCTCCAGAA |
| | | F: GAAGGTCGGAGTCAACGGATTAGCCTTTGGAGCATCTCCAGAG |
| | | R: GAAGGTTTTTGAAAATGGATCAGTTGCCAA |
| VIT_6_4258638 | C/T | F: GAAGGTGACCAAGTTCATGCTTGTCAGAGATCCTGTTTTCTCG |
| | | F: GAAGGTCGGAGTCAACGGATTACTGTCCAGAGATCCTGTTTTCTCA |
| | | R: CTTTCAGCAGGCAGCAATGGAAAGTT |
| VIT_6_17593092 | A/T | F: GAAGGTGACCAAGTTCATGCTCTGCATTTCGTTACCTGTCAACTTA |
| | | F: GAAGGTCGGAGTCAACGGATTCTGCATTTCGTTACCTGTCAACTTT |
| | | R: ATCTGCATCTTCGAGCTTGTCTTAATT |
| VIT_7_1388822 | A/G | F: GAAGGTGACCAAGTTCATGCTCGTCCGGATGCATTGCGCCT |
| | | F: GAAGGTCGGAGTCAACGGATTGTCCGGATGCATTGCGCCC |
| | | R: GGCAAACGCTGATTGGCTGGAGTA |
| VIT_7_18046355 | A/G | F: GAAGGTGACCAAGTTCATGCTAAATGTGGCTGCAGTTGAGAAGACT |
| | | F: GAAGGTCGGAGTCAACGGATTTGTGGCTGCAGTTGAGAAGACC |
| | | R: CATACCACAGGATTAAGTATACATCCATA |
| VIT_8_3320936 | C/T | F: GAAGGTGACCAAGTTCATGCTTGGAGGGTAAAAATGAACTCAATTTGAC |
| | | F: GAAGGTCGGAGTCAACGGATTATTGGAGGGTAAAAATGAACTCAATTTGAT |
| | | R: CCTTTCTGATGATAGAAGCAGTGGGAA |
| VIT_8_13401437 | A/C | F: GAAGGTGACCAAGTTCATGCTCTGGTTCCAATCCCTCATCCGTA |
| | | F: GAAGGTCGGAGTCAACGGATTTGGTTCCAATCCCTCATCCGTC |
| | | R: AAGGAGACTAAGATAAAGGTGTAGTATACAT |
| VIT_9_3123999 | A/T | F: GAAGGTGACCAAGTTCATGCTTGTCTTGACTCATCATATTTGACAGCA |
| | | F: GAAGGTCGGAGTCAACGGATTTGTCTTGACTCATCATATTTGACAGCT |
| | | R: GGTGTGAAGACGATAATGGGTCCAAT |
| VIT_9_21409416 | C/T | F: GAAGGTGACCAAGTTCATGCTTCCAGAAACCAGCTAGTGTGGC |
| | | F: GAAGGTCGGAGTCAACGGATTATTCCAGAAACCAGCTAGTGTGGT |
| | | R: CGGAAAACCTCCATACCGCGTGAAA |
| VIT_10_5489212 | C/T | F: GAAGGTGACCAAGTTCATGCTTGCTTCTCCACGAAGGCTGTC |
| | | F: GAAGGTCGGAGTCAACGGATTCTGCTTCTCCACGAAGGCTGTT |
| | | R: GCAACGTCTCCTACGACACGGAA |
| VIT_11_311765 | A/C | F: GAAGGTGACCAAGTTCATGCTTGGGGGAAGTAGTTGGTTGCCA |
| | | F: GAAGGTCGGAGTCAACGGATTGGGGGAAGTAGTTGGTTGCCC |
| | | R: GAATTAGAGACCCAGAGAGAAGGGAAA |
| VIT_11_5406647 | A/C | F: GAAGGTGACCAAGTTCATGCTTATCAGAATGTTGGATTTTGAAATTGAATGTTA |
| | | F: GAAGGTCGGAGTCAACGGATTTCAGAATGTTGGATTTTGAAATTGAATGTTC |
| | | R: TGTTACGGTTTTGCTAACTCAAAATCCTTAT |

| | | |
|-----------------|-----|---|
| VIT_11_19390306 | G/A | F: GAAGGTGACCAAGTTCATGCTGTTCAAGCTGGGGGAGAATATATAC F: GAAGGTCGGAGTCAACGGATTGGTTCAAGCTGGGGGAGAATATATAT R: GTCGGAGTCCATGTATCGCCGTTA |
| VIT_12_739916 | C/T | F: GAAGGTGACCAAGTTCATGCTGCTGAACACACTTTTTCCAAGTTCG F: GAAGGTCGGAGTCAACGGATTAAGCTGAACACACTTTTTCCAAGTTCA R: GGTTTGGGAGGGGACAAAGATCTAATT |
| VIT_12_22228357 | A/C | F: GAAGGTGACCAAGTTCATGCTCAACTTCACGGTGACCGAATTCATA F: GAAGGTCGGAGTCAACGGATTAACTTCACGGTGACCGAATTCATC R: GGTCGACGGCAGCCACAGGTTT |
| VIT_13_21618145 | A/T | F: GAAGGTGACCAAGTTCATGCTTCGAGTTGCTTAGATAAACACATTAATCT F: GAAGGTCGGAGTCAACGGATTTCGAGTTGCTTAGATAAACACATTAATCA R: CATCATGTGATTCTATGCAAAAATTATTAGAATTAA |
| VIT_14_4947068 | T/G | F: GAAGGTGACCAAGTTCATGCTTATTCCTACCTGCGTTTCGTCGA F: GAAGGTCGGAGTCAACGGATTATTCCTACCTGCGTTTCGTCGC R: CTGTGGCCCCGGTGGGGCTT |
| VIT_14_5687725 | A/T | F: GAAGGTGACCAAGTTCATGCTATGATGCTTTGAATAGAATAAATGAGAACAAT F: GAAGGTCGGAGTCAACGGATTATGATGCTTTGAATAGAATAAATGAGAACAAA R: AACTTGCAACATGACAACCACAAACCAA |
| VIT_14_23135445 | A/T | F: GAAGGTGACCAAGTTCATGCTAATTAGCAGGGAGGGGTGGCAA F: GAAGGTCGGAGTCAACGGATTAATTAGCAGGGAGGGGTGGCAT R: GAACTTTAGCAGTAGTTCAGCTTCATGAT |
| VIT_14_29590769 | C/T | F: GAAGGTGACCAAGTTCATGCTTTCCTCCAAGTCTCCATGTGCG F: GAAGGTCGGAGTCAACGGATTGTTCTCCAAGTCTCCATGTGCA R: CAAAGCCCTTTGACAGACAACCTTCAA |
| VIT_15_15145042 | A/C | F: GAAGGTGACCAAGTTCATGCTGTATATTTGTTTCATCAGACATACTAACACT F: GAAGGTCGGAGTCAACGGATTTATATTTGTTTCATCAGACATACTAACACG R: GCAGAGAGAAGCTCAGACATCTCATT |
| VIT_15_18031506 | A/C | F: GAAGGTGACCAAGTTCATGCTTAACTGATACATAAAACTGAAAAATCGGGT F: GAAGGTCGGAGTCAACGGATTACTGATACATAAAACTGAAAAATCGGGG R: GGGAGTAGAACCTGAAAGCAAGCATA |
| VIT_15_18127737 | T/G | F: GAAGGTGACCAAGTTCATGCTGGATGTGATGTAGGGGTCCTTGT F: GAAGGTCGGAGTCAACGGATTGATGTGATGTAGGGGTCCTTGG R: CATATCACCTTTTCTAGGACTAAAACCCAA |
| VIT_15_18567587 | T/G | F: GAAGGTGACCAAGTTCATGCTCTGTATTAAAGCTCTTGGGTGAAAACT F: GAAGGTCGGAGTCAACGGATTTGTATTAAAGCTCTTGGGTGAAAAACG R: ATTGTTGGGCACAAATACGCTCAAGATT |
| VIT_16_13454358 | A/G | F: GAAGGTGACCAAGTTCATGCTGCTTTTGACGTGAGAGAGCAAGAATT F: GAAGGTCGGAGTCAACGGATTCTTTTGACGTGAGAGAGCAAGAATC R: CTGGTGCATATAAGGTTGCAGTTGTAA |
| VIT_16_16198599 | A/G | F: GAAGGTGACCAAGTTCATGCTGCACAACAATTTCTCCAGCTTCGTT F: GAAGGTCGGAGTCAACGGATTCAACAACAATTTCTCCAGCTTCGTC R: AGAAATGGACTCACGTAGGTGTTAAGTT |
| VIT_16_17950801 | A/G | F: GAAGGTGACCAAGTTCATGCTTCTGCTTGAGGGGGAGTGACAA F: GAAGGTCGGAGTCAACGGATTCTGCTTGAGGGGGAGTGACAG |

| | | |
|-----------------|-----|--|
| | | R: TAGTGGAACATCTCCCACTTGATTCATA |
| VIT_16_21202286 | A/G | F: GAAGGTGACCAAGTTCATGCTACCCAATGGAATCGATCCAATGTCA F: GAAGGTCGGAGTCAACGGATTCCAATGGAATCGATCCAATGTCTG R: CTGGTTAATTTTCAGACGAAGCCAAGTATA |
| VIT_17_126505 | A/G | F: GAAGGTGACCAAGTTCATGCTTCAGTATTATGAGGAATGCTATTTATGAGT F: GAAGGTCGGAGTCAACGGATTGAGTATTATGAGGAATGCTATTTATGAGC R: GGTCTTGCAAGATATCCCAGAACATAT |
| VIT_17_6000914 | C/T | F: GAAGGTGACCAAGTTCATGCTAACTGTTCCCAGCCGGATTGAG F: GAAGGTCGGAGTCAACGGATTGAACTGTTCCCAGCCGGATTGAA R: GCCGACCCCATCTGTCACTAT |
| VIT_17_12206201 | A/G | F: GAAGGTGACCAAGTTCATGCTCGCCATCTTATGACAATTGATGAACTA F: GAAGGTCGGAGTCAACGGATTGCCATCTTATGACAATTGATGAACTG R: CCTTTTAGTGACAGGTGGAATAAGAGAAAT |
| VIT_18_3829207 | A/C | F: GAAGGTGACCAAGTTCATGCTTGCAAAGTGGGAAGCAAATGTCTCT F: GAAGGTCGGAGTCAACGGATTCAAAGTGGGAAGCAAATGTCTCG R: CAAGGATATTGTTGAGCTCCGAAATCAA |
| VIT_18_6487636 | A/C | F: GAAGGTGACCAAGTTCATGCTAGATTGAATATCTCCATACCTTCGTCA F: GAAGGTCGGAGTCAACGGATTGATTGAATATCTCCATACCTTCGTCC R: GGGATAAAACATTCAAAGCCCATAAAATTAATTT |
| VIT_18_11138668 | A/G | F: GAAGGTGACCAAGTTCATGCTGACATGTTTCCATACTGATCCTCCTA F: GAAGGTCGGAGTCAACGGATTACATGTTTCCATACTGATCCTCCTG R: CTGGACATTTTCAACCATGATGATGATGAT |
| VIT_19_7217380 | A/T | F: GAAGGTGACCAAGTTCATGCTGGTCTTCATCCAAGATATGTATCTCATT F: GAAGGTCGGAGTCAACGGATTGGTCTTCATCCAAGATATGTATCTCATA R: CATACGATTAAATGGATGCGGGCAGTT |
| VIT_19_17751334 | G/T | F: GAAGGTGACCAAGTTCATGCTCATGAGGCGTTTTTCATCACCAAC F: GAAGGTCGGAGTCAACGGATTGCATGAGGCGTTTTTCATCACCAAA R: GTTTGGCTCCAGACTTGCTGAATTT |

引物名称是由“VIT_SNP 所在的染色体号_SNP 对应的具体位置”组成

The name of the marker is composed of “VIT_ chromosome position of SNP _the specific position of the SNP”