

Table 1 A list of ten primer pairs for sequencing the complete *Badh2/badh2* alleles and five functional markers for genotyping

| Primer | PCR product size (bp) | Primer sequence | |
|-------------|---|----------------------------|-----------------------------|
| | | Forward primer (5'-3') | Reverse primer (5'-3') |
| Badh2P1 | 995 | GTCTCTCCTCCAACATGCTC | GTGGTGTTCAGGTGTGGAGTG |
| Badh2P2 | 972 | CCGAAGTCCGTACCAACTGC | CAATCAGCCATGCTTCCAAC |
| Badh2P3 | 855 | GTGCGTATCCTCTGTTCTGG | CAAGCGTCTCTAGTCTAGCC |
| Badh2P4 | 1025 | CTGAGCTGGCTAGACTAGAG | CCATCAGGAGAGGATAGTTC |
| Badh2P5 | 1026 | CCTCCGTGTTAATGCAGCTC | CATAGCAAGTGGCATGTACC |
| Badh2P6 | 926 | GGTTGGTCTTCCTCAGGTG | GTCCTTCTAACTGCCTTCC |
| Badh2P7 | 984 | CCAGACGAGCAGGATGCAAG | CATGGTCAGGAGCAAGAAGC |
| Badh2P8 | 912 | GTGGCAAGGAAGGCAGTTAG | GCAATAAGGCTTGAAGGAC |
| Badh2P9 | 1023 | TTTCAGCTTCTTGCTCCTGA | CAGTTAATCTCTGGCATCGC |
| Badh2P10 | 1083 | GGCCAACGATACTCAGTGAG | CCGGTCATCAGCTAACTTCC |
| InDel-E7 | 196 (<i>badh2-E7</i>) 204 (<i>Badh2</i>) | ATACCCCATCAATCGAAAT | GAAAAGGACAACATTGAGAA |
| FMbadh2-E7 | 260 (<i>badh2-E7</i>) 268 (<i>Badh2</i>) | GGTTGCATTTACTGGGAGTT | CAGTGAAACAGGCTGTCAAG |
| FMbadh2-Pro | 206 (<i>badh2-E7</i>) 198 (<i>Badh2</i>) | ATAATATCGGTTCGAAACATTTTATT | GAGAAGCTTTTACACTTTATGCACATC |
| FMbadh2-E7A | 145 (<i>badh2-E7</i>) 153 (<i>Badh2</i>) | ACAAGGTACAGCTATTCCTCCT | TAACCATAGGAGCAGCTGAA |
| FMbadh2-E7B | 130 (<i>badh2-E7</i>) 138 (<i>Badh2</i>) | GGTTTATGTTTTCTGTTAGGTTGCA | AGAGAGTTAGTAGAAAGAGAACAAA |

Note: Badh2P1-P10, FMbadh2-E7 taken from Shi et al. (2008); InDel-E7 from Wang et al. (2008); FMbadh2-Pro from Shi et al. (2014); FMbadh2-E7A and FMbadh2-E7B are newly designed markers in this study