

Table 1 Functional alleles detected in this study

No.	Cultivar name	Phenotype	Genotype	<i>badh2-E4-5.1</i> ²	<i>badh2-E7</i>	Validation results of Real-time marker
CK	Nipponbare	Nonfragrance	Wildtype	-	-	Agree
1	Guduishi	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
2	Xiangdanuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
3	Jingxixianggu	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
4	Longlinxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
5	Daxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	No Signal in <i>badh2-E4-5</i>
6	Baoanxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
7	Lienuo	Fragrance	Double mutation	Heterozygous	+	Agree
8	Gaolingxiangnuo	Fragrance	Double mutation	Heterozygous	Heterozygous	<i>badh2-E7</i> is consistent <i>badh2-E4-5</i> deletion
9	Disuxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
10	Dahongnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
11	Hongnuo	Fragrance	Double mutation	+	+	Agree
12	Goudunuo	Fragrance	Double mutation	+	+	Agree
13	Yuhongxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
14	Xiadongxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
15	Yinkenuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
16	Danuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
17	Pohexiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
18	Baishaxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
19	Zaixuxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
20	Nasuoxiangnuo	Fragrance	Double mutation	Heterozygous	+	Agree
21	Sanlixiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
22	Xiangnuo	Fragrance	vague	-	-	Agree
23	Longxiangxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
24	Xiaoxiangnuogu	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
25	Lengshuiniuogu	Fragrance	<i>badh2-E4-5.1</i>	+	-	No Signal
26	Daxiangnuogu	Fragrance	vague	-	-	Agree
27	Dabaipinuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
28	Gumini	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
29	Nakanxiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
30	Dajingnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
31	Bendixiangnuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
32	Huangkebaiminuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	<i>badh2-E4-5</i> heterozygous
33	Dahenuo	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
34	Xiangmi	Fragrance	<i>badh2-E4-5.1</i>	+	-	Agree
35	Shanzinuo	Fragrance	<i>badh2-E4-5.1</i>	Heterozygous	-	Agree
36	Yachangxiangnuo	Fragrance	Double mutation	Heterozygous	+	Agree
37	Bayueno	Fragrance	<i>badh2-E4-5.1</i>	Heterozygous	-	Agree
38	Guangtangxiangnuo	Fragrance	vague	-	-	Agree
39	Fuliuxiangnuo	Fragrance	Double mutation	Heterozygous	+	Agree
40	Guyixiangnuo	Fragrance	Double mutation	Heterozygous	Heterozygous	Agree

Note: 1: Double mutation means this sample contains two types of mutation; 2: + (plus sign) Yes /- (minus sign) No. Heterozygous means contains two types of mutation; 3: Agree means the results of Real-time PCR is consistent with the results of Sanger sequence, and No signal means fail to detect by Real-time PCR