

**Table S4.** Primers were used in this study.

Primer names	Sequence of primers (5'-3')	Aims
sgRNA: Z1-F	ATTGAGGAGAGGAACGCAGTAGC	The synthesis of target site
sgRNA: Z1-R	AAACGCTACTGCGTTCCTCTCCT	
sgRNA: Z2-F	ATTGACCTAACATGAAACCTCCG	
sgRNA: Z2-R	AAACCGGAGGTTTCATGTTAGGTC	
sgRNA: Z3-F	ATTGGAGCCTGTACCTTACAAGGG	
sgRNA: Z3-R	AAACCCTTGTAAGGTACAGGCTCT	
sgRNA: C1-F	ATTGAATAACCAGAGCTCCCACCA	
sgRNA: C1-R	AAACTGGTGGGAGCTCTGGTTATT	Detection of the mutation in transgenic plants
sgRNA: Z1-CRISPR test-F	ATCCCACTGGCCATAGTTAGGC	
sgRNA: Z1-CRISPR test-R	CAAGTCCAGCTCCAATGATAGCTAC	
sgRNA: Z2-CRISPR test-F	ATCCCACTGGCCATAGTTAGGC	
sgRNA: Z2-CRISPR test-R	CAAGTCCAGCTCCAATGATAGCTAC	
sgRNA: Z3-CRISPR test-F	CTCTCGACGCCGATGTTTCCG	
sgRNA: Z3-CRISPR test-R	CATCAAGCGGAAGAGGTTGTTGTAG	
sgRNA: C1- CRISPR test-F	ATGAATCTCTGTCTCCGCAACCC	
sgRNA: C1-CRISPR test-R	AACCTCCATCTCACGACCAACTG	
Hyg-F	CGATTGCGTCGCATCGACC	Detection of the hygromycin resistance gene
Hyg-R	TTCTACAACCGGTCGCGGAG	