Cite this as: Shan LI, Song-Mei LIU, Hao-Wei FU, Jian-Zhong HUANG, Qing-Yao SHU, 2018. High-resolution melting-based TILLING of γ ray-induced mutations in rice. *Journal of Zhejiang University-Science B (Biomedicine & Biotechnology)*,19(8):620-629. https://doi.org/10.1631/jzus.B1700414

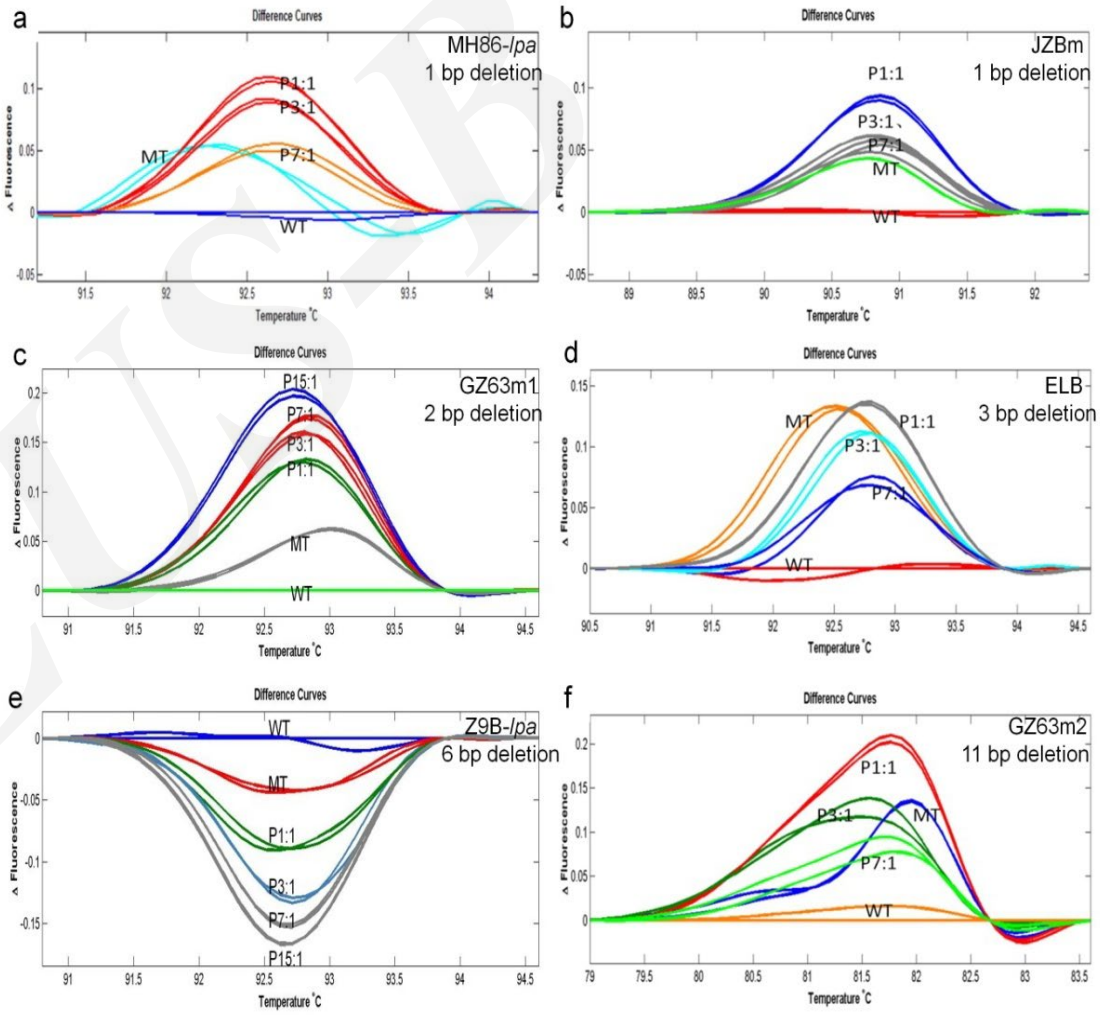
JZUS-B

High-resolution melting-based TILLING of γ ray-induced mutations in rice

Key words: **Mutation screening, High-resolution melting (HRM) analysis, Targeting Induced Local Lesions IN Genomes (TILLING), Mutant, Indel, γ ray, Rice**

Research Summary

- **Pooled samples mixed at a 1:7 ratio of Indel mutant to wild-type DNA could be distinguished from the wild-type controls by HRM.**
- **Mutations including one single nucleotide substitution (G→A) and one single nucleotide insertion (A) were identified in *OsLCT1*, and one trinucleotide (TTC) deletion was in *SPDT*.**



Innovation points

- **The present study represents the first report on HRM-TILLING of γ ray-induced mutations in a seed crop.**

- **The findings are of importance for the application of γ ray mutagenesis to the breeding of rice and other seed crops.**

