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Assessment of Salt Tolerance in PsGPD Transgenic Rice by Integration Sites Analysis.

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In recent years, green house effect induced climate changes. It's expected to cause serious damage to agricultural productivity and movement of cultivated land.
Of all abiotic stresses, Salt stress is particularly an important abiotic stress that seriously affects plant growth and development. Transgenic potatoes expressing glyceraldehyde-3-phosphate dehydrogenase (GPD), isolated from Pleurotus sajor-caju. Expression levels of the GPD gene in the mycelia of Pleurotus sajor-caju was significantly increased by exposing the mycelia to abiotic stresses, such as salt, cold, heat, and drought. We also showed that GPD confers abiotic stress.
We generated PsGPD-overexpression transgenic rice plants using Agrobacterium-mediated transformation method. We advanced generation of PsGPD independent homozygous transgenic lines that were selected single-copy/intergenic line. phenotype analysis showed differences between the transgenic PsGPD-OX transgenic rice plants and Wild-type rice plants. The transgenic lines showed that average survival rates improved compared to wild-type plants after re-watering.
Molecular characterization of Integration site analysis is necessary for safety assessment and labeling of genetically modified organism (GMO).
We performed adapter ligation PCR to find the insertion sites of PsGPD transgene and flanking sequences. Befor anything else, Identification of genomic insertion sites of PsGPD transgene is useful for the biosafety assessment.

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