Identification of Genes Expressed in Cold Tolerance Weedy Rice

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This study was conducted to search for genes related to cold tolerance and to investigate the mechanism of cold tolerance and biological roles of proteins expressed in cold tolerance weedy rice. To search the cold tolerant weedy rice, Total of 1,304 different weedy rice strains, were tested for low temperature-germination ability and cold tolerance of seedling. Results indicated that, the weedy rice Suwonaeimgi 5 was revealed to be tolerant to low-temperature germination for germination and seedling growth. ACP-based GeneFising™ PCR was carried out in order to analyze protein of the cold tolerant weedy rice. Total RNA were extracted after treating at 4°C for 6 hrs, and cDNA were synthesized with 120 ACP primers. To investigate the difference of protein expression in cold tolerant 2D electrophoresis, image analysis and MOLTI-TOF were conducted and cold tolerance related proteins were identified.

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