

## Cryopreservation of Transgenic Rice Suspension Cells Producing rhCTLA4Ig

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### Abstract

Rice cells (*Oryza sativa* L.) have been utilized as a host for the production of recombinant proteins at a high level. Cryopreservation of transgenic plant cells is a critical step for the commercial production of recombinant proteins. For that reason, effective procedures for the long-term storage and regrowth of transgenic rice cells producing recombinant human cytotoxic T lymphocyte-associated antigen 4 immunoglobulin (rhCTLA4Ig) fusion protein were developed by using slow freezing method, cryoprotectant mixture, etc. Cell viability after 1 month of cryopreservation was 72% and maintained up to 1 year of storage period. Post-thaw regrowth after immersion into liquid nitrogen was found to be induced by the mild elimination of cryoprotectant in N6 agar medium and the genetic stability of rhCTLA4Ig was identified with RT-PCR analysis. Finally, cell growth and the rhCTLA4Ig production after the cryopreservation were similar to those of normally subcultured transgenic rice cells. Cryopreservation technique developed in this study would be useful for the stable maintenance of high-producing cell line.

### Reference

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