

## Optimization of induction time for the production of hGM-CSF in transgenic rice cell cultures

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### Abstract

The transgenic rice cell line used in this study was designed to produce recombinant human granulocyte-macrophage stimulating factor (hGM-CSF) in an inducible manner by sugar depletion. Because the secreted hGM-CSF in culture media is commonly degraded by the action of many proteases that are simultaneously produced during the culture period, it was effective that the whole medium was exchanged into new induction medium without sucrose at production stage. Therefore, in order to optimize the time for medium exchange, various induction times were examined and the time course behaviors of cell growth and hGM-CSF production were monitored. All the cultures were inoculated at the same day and the media was exchanged into induction media at the fourth, sixth, and eighth days after inoculation. Maximum hGM-CSF level (16.0 mg/L) was obtained at the tenth day after induction in the case of induction at day 6 from inoculation, which was a 2.88-fold increase compared to that of control.

### References

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