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Information Table of Contents Search This CD-Rom >> Exit

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후원: 한국과학기술단체총연합회, 한국과학재단, Korea 바이오리브센터



Production of Psychrophilic Chitinase from Antarctic Microorganism by Recombinant *Escherichia coli*

Se Jong Han, Heeyong Park, Dockyu Kim, Il-Chan Kim, Joung Han Yim

Polar BioCenter, Korea Polar Research Institute, Songdo Techno Park, 7-50 Songdo-dong,

Yeonsu-gu, Incheon 406-840, Korea

TEL: +82-32-260-6370, FAX: +82-32-260-6301

In order to enhance the production of psychrophilic chitinase, recombinant *Escherichia coli* Top 10 harboring chitinase gene from Antarctic microorganism KOPRI 22718 was cultivated using flask and jar fermentor. Expression of target protein was performed by L-arabinose addition and confirmed by SDS-PAGE and activity test with p-nitrophenyl-N-acetyl- β -D-glucosaminide as a substrate.

To increase the cell density and production of enzyme, modified R-medium was tested as a fermentation medium and effect of L-arabinose concentration was also observed. About 28 times higher enzyme production was obtained by using modified R-medium with lactose and 2.5g/L of L-arabinose in fermentor culture than that by using LB medium in flask culture.

References

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