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Heterologous expression of *Bacillus ginsengihumi* phytase gene

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Abstract

Phytate is the most abundant reservoir of phosphorus, which can potentially be used by microorganisms, plants and animals. Microbial phytases, capable of hydrolysing insoluble phytates, can be used as animal feed additives. In the present study, we isolated new phytase-producing bacteria - *Bacillus ginsengihumi* M2.11, which was identified using Microbial Identification System and 16S rRNA sequencing. We first cloned and sequenced the 1149 bp open reading frame encoding *Bacillus ginsengihumi* M2.11 phytase into the expression vector pET-46 Ek/LIC by the LIC-cloning method (cloning without ligase). The recombinant *E.coli* strain expressing *Bacillus ginsengihumi* M2.11 phytase was obtained. The molecular weight of phytase was 41 kDa.

Keywords

Bacillus, Cloning, Expression, Phytase