

(05-1-25)

## SLTI 114 gene has matrix metalloproteinase activity from Soybean (*Glycine max*)

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### Objectives

Functional analysis of SLTI114 gene.

### Materials and Methods

#### 1. Material

Plant – *Glycine max*. cv Sinpaldal 2, E.coil BL21, vector pET

#### 2. Methods:

Construction of expression plasmid, Expression of the SLTI114 gene in E.coil

### Results and Discussion

An electrophoresis in polyacrylimide gel (SDS-PAGE) was performed with SLTI 114 protein to get basic information of the activity of the metalloproteinase. The recombinant SLTI 114 protein purified by affinity chromatography on HisTrap™ Chelating HP, 1 ml column (Amersham) bound with Ni<sup>2+</sup> ions in 20mM phosphate buffer containing 0.2M NaCl and 10mM imidazole with a flow rate of 1 ml/min.

We found that the suspension-cultured cell infected with SLTI114 exhibited a higher proteolytic activity in digesting Azocoll, substrate for metalloproteinase activity assay (Graham et al.,1991)

The present study suggests that SLTI114 may have metalloproteinase activity.

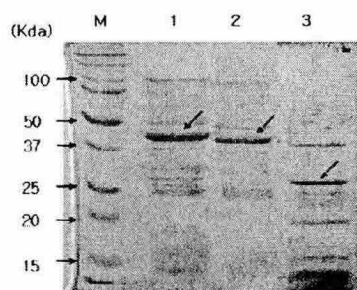


Fig. 1. SDS-PAGE analysis of the recombinant proteins produced in *E. coli* cells.

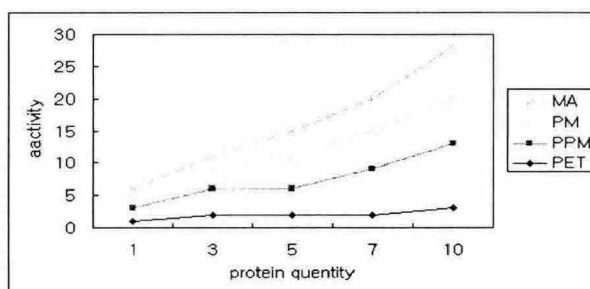


Fig. 2. The effect of metalloproteinase activity on differ protein quantity.