

## Isolation and Characterization of a Chitinase Gene Exhibiting Antifungal Activity Against *Fusarium solani* f. sp. *melongenae* from an Iranian *Streptomyces* strain

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### Abstract

*Fusarium solani* f. sp. *melongenae*, the causal agent of egg plant wilt disease, has a wide host range which causes significant reduction in yield of eggplant (*Solanum melongena*). In a survey for finding biocontrol agents, 110 Actinomycetes strains were isolated from agricultural soils of Kerman province. Among isolated strains 18 strains showed high level of chitinase activity *Streptomyces griseus*. *Streptomyces* isolate 401 significantly reduced the incidence of disease. Some biological and physiological characteristics of this isolate were investigated under green house condition. Moreover, the genomic DNA of this isolate was extracted by using of CTAB method and a full chitinase gene (876 bp) was cloned and sequenced. The results showed high similarity between obtained sequence and sequence of chitinase gene 19 family from.

**Keywords:** Biological control, *Streptomyces*, Chitinase, *Fusarium solani*

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To look at the figures and tables, please refer to the Persian text (pages: 39-47= 39-47).