

Cloning and Characterization of Serpin Superfamily: Serpins 1, 2 and 3

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Here, we report the cloning and characterization of serpin 1, 2 and 3 genes from late instar *Plutella xylostella* larvae which are immunized with Gram positive and negative bacteria. Insect serpins are well known to regulate proteinases involved in hemolymph coagulation, antimicrobial peptide synthesis and melanization of pathogen surfaces. *Plutella xylostella* serpin 1, 2 and 3 genes consist of 1546, 1239 and 1986 base pairs and each of them coded 395, 394 and 450 amino acids respectively. All of these genes have signal sequences and this fact will suggest that serpins are likely to be secreted into the hemolymph. Northern blotting shows that the expression levels of these genes are drastically increased at the early and gradually decreased in the course of time.