

Cloning and Partial Characterization of SOCS5 from the Beet Armyworm, *Spodoptera exigua*

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Insect innate immunity has been one of the hot issues in conjunction with host-pathogen interactions. Suppressor of cytokine signaling (SOCS) is known to play a key role in the insect defense system. SOCS has been characterized as a negative feedback regulator in JAK-STAT signaling cascade involved in NOS production. Our laboratory has recently been involved in the interactions between *S. exigua* and SeNPV. This context lead us to clone and characterize a SOCS gene that may have important functions in response to pathogens. Using the RT-PCR and TA cloning approach, we found a partial fragment (416bp) of SOCS5 from *S. exigua*. Blast search and multiple alignment data showed that it has a homology to various insects such as *Anopheles gambiae* (78%), *Aedes aegypti* (75%), *Drosophila Melanogaster* (77%), *Mus musculus* (69%), and *Homo sapiens* (69%). Temporal induction patterns of SeSOCS5 were analysed after being immune-challenged with NPV and laminarin. It showed that the level of SeSOCS5 mRNA was strongly induced in response to SeNPV and laminarin, respectively. Future work will be focused on the cellular distribution of SeSOCS5 in the NPV-invaded cells using confocal microscopy and the antibody against the recombinant SeSOCS5.