NOVEL PLAYERS IN ECDYSIS REGULATION: A MOLECULAR CHARACTERIZATION OF CRUSTACEAN HYPERGLYCEMIC HORMONE IN MANDUCA Sexta

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Abstract

Fig. 1

Manduca sexta, were used to localize CHH-like peptides to two different species of Crab CHH are immunoreactive in M. Sexta, A

Discussion and Future Directions

Results from immunohistochemistry reveal that antibodies against two different species of Crab CHH are immunoreactive in M. Sexta, indicating conservation across taxa.

A conserved region of the CHH gene was amplified and sequenced using degenerate oligonucleotide primers from genomic DNA of M. sexta, and used in a comparison of known CHH coding sequences.

This sequence will be used to design probes to quantify and monitor mRNA expression in situ by Hybridization and Northern Blot Analysis.

References

Chung, J.S., Dircksen, H., and Webster, S.G. "A remarkable, precisely staged molting hormone in crabs: the hyperglycemic hormone (MIH) and crustacean hyperglycemic hormone (CHH) in the crab, Sesarma mediterraneum." Endocrinology 139(9): 3963-73 (1998).

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Methods

Primary antibody: Rabbit anti-Crussaca CHH and Rabbit anti-Drosophila CHH (1:1000).


Blocking: Preabsorb with CHH peptide from Cancer救人32pmol and Cancer救人32pmol.

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Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Summary of experimental conditions and materials used in the study.</td>
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</tbody>
</table>

Diagram

Figure 1: Schematic diagram of the experimental setup. The experiment consisted of two phases: (A) CHH-like peptide expression in Manduca sexta, and (B) functional characterization of the peptide in vivo. The experiment was designed to test the hypothesis that CHH-like peptides play a role in insect ecdysis.

Figure 2: (A) Sequence comparison of nucleotide sequences from 3 CHH-like genes in crustaceans and insects. (B) Comparison of amino acid sequences from crustaceans and insects. A conserved region of the CHH gene was amplified and sequenced using degenerate oligonucleotide primers from genomic DNA of M. sexta, and used in a comparison of known CHH coding sequences.