

**E105 Sequence of cDNA Clone Corresponding to
Lysozyme from *Artogeia rapae***

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Lysozyme is one of the antibacterial peptides that are produced by the cabbage butterfly, *Artogeia rapae*. We have previously obtained the partial DNA sequence encoding the lysozyme from analysis of the DNA fragment which were amplified by use of RT-PCR and subcloned into the T-vector.

A cDNA encoding lysozyme was isolated from the fat body cDNA library of the cabbageworms immunized with *E. coli*. Therefore, a probe to screen the lysozyme cDNA was prepared by RT-PCR and sequenced by dideoxynucleotide chain termination method. Plaques (1×10^5) were transferred onto a nylon membrane filters and screened with a lysozyme probe prepared by PCR.

We will discuss the complete sequence of cDNA coding for lysozyme.

**E106 Purification and Some Properties of Phenoloxidase
from the Larval Haemolymph of *Spodoptera litura***

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During studies of non-self recognition in insects, Phenoloxidase(PO) system from the larval haemolymph of *Spodoptera litura* was analyzed. Phenoloxidase activity has been determined using phenolic substrates. The enzyme catalysed the oxidation of other di-phenols besides dopa but not the monophenol tyrosine, even in the presence of a catalytic amount of dopa. Phenoloxidase was purified from the larval haemolymph using Sephadex G-100 and ion-exchange resin. It was also found that incubation of haemolymph with acetone, certain alcohols, organic compounds and heat treatments served to induce enzyme activity. Other experiments included determination of the Michaelis constants for dopa, and some enzymological properties of the phenoloxidase(PO) and prophenoloxidase(PPO).