

Selection of a Diapause-associated Peptide and Its Related Gene in the Eggs of Silkworm, *Bombyx mori*

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In *Bombyx mori*, diapause occurs at early embryonic stage by the action of diapause hormone. In an attempt to reveal the molecular changes of silkworm eggs accompanied with diapause or embryogenesis, two-dimensional electrophoresis was performed and a putative diapause-associated peptide could be isolated from silkworm eggs. The peptide was observed in 2-day-old eggs after HCl-treatment. But this peptide was not detected in diapausing eggs that were kept at 25°C for 30 days after oviposition. The chemical characteristics of the peptide were molecular weight of 21kDa and isoelectric point of 6.3. The analyzed partial peptide sequences by N-terminal sequencing were used to design the degenerate primer for RACE-PCR. The product obtained by 3'-RACE PCR was used for characterization by northern blot analysis. The mRNA transcription of the eggs maintained high expression level throughout the embryogenesis from two days after HCl-treatment, while the transcription level was very low in diapausing eggs. High mRNA transcription was also observed in testis and ovary of the 5th instar larvae.