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Nucleotide and deduced amino acid sequences of a cDNA encoding a lipocalin protein in the central nervous system of *Bombyx mori*

K. Suzuki, M. Sakai and H.-S. Song

Faculty of Agriculture, Iwate University, Morioka 020-8550, Japan

We isolated a protein from pupal brain extract of the silkworm, *Bombyx mori*, using two chromatographic steps, and identified its N-terminal amino acid sequence. Based on the amino acid sequence, degenerate oligodeoxynucleotide was synthesized and used as a hybridization probe to screen a pupal brain cDNA library. The sequence analysis of the identified cDNA clones indicated that a 603 bp open reading frame encoded a 201-amino-acid protein containing a 15-amino-acid leader peptide. This protein has a high similarity to the *Galleria mellonella* Gallerin as a member of the lipocalin family. Northern blot analysis clearly showed a ca 1.4 kb transcript in the central nervous system, but not in the fat body, salivary glands and Malpighian tubules of 1-day old female pupae. Antiserum prepared for the protein was used for immunochemistry. We named this novel protein from *Bombyx* central nervous system, Bombyrin, and discussed possible functions of Bombyrin in the central nervous system, although members of lipocalin family are well known to serve as transport proteins.