

**Molecular Characterization of a cDNA from the Silk Moth  
*Bombyx mori* Encoding *Manduca sexta* Allatotropin Peptide**

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Allatotropin is a 13-residue amidated neuropeptide isolated from pharate adult heads of the tobacco hornworm, *Manduca sexta* and strongly stimulates biosynthesis of juvenile hormones in adults, but not larval, lepidopteran corpora allata. From a *Bombyx mori* midgut cDNA library, a cDNA that encodes a 130-amino-acid polypeptide containing *M. sexta* allatotropin sequence was isolated. The *B. mori* allatotropin cDNA consists of 1196 nucleotides. The encoded allatotropin peptide is identical to that isolated from *M. sexta* and that predicted from *Pseudaletia unipuncta*, with 84% and 81% identity in the amino acid sequence of the allatotropin peptide precursor, respectively. *M. sexta* allatotropin is flanked by two different endoproteolytic cleavage sites within the precursor of the *B. mori* allatotropin peptide. Evidence from northern blotting of *B. mori* tissues showed that the allatotropin gene is expressed in the cells of midgut, head and integument with different transcription amount, but not in the fat body and silk gland. Midgut has also a number of AT-immunoreactive cells and nerve fibers. These results will provide valuable information in understanding the AT gene of insects.