

**Molecular cloning and characterization of the gene
encoding β -*N*-acetylglucosaminidases homologue from
*Bombyx mandarina***

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Chitinolytic enzymes such as β -*N*-acetylglucosaminidase are major hydrolases involved in insect molting. We have isolated, sequenced a cDNA encoding β -*N*-acetylglucosaminidase from the silkworm, *Bombyx mandarina*, and compared its sequence with genes encoding chitinolytic enzymes from other sources. The insert DNA in the clone is 3,284 nucleotides long with an open reading frame of 1,788 nucleotides that encodes a protein of 596 amino acids with a molecular weight of 68.2 kDa. There is a 3' -untranslated region composed with 1,479 nucleotides and are several potential polyadenylation signals. The predicted amino acid sequence apparently contains a leader peptide of 23 amino acids. A search of the amino acids sequence databases for sequences similarities to other β -*N*-acetylglucosaminidases or β -*N*-acetylhexosaminidases. The highest similarity matched with the enzyme from *B. mori*, which has a sequence identity of 95%. On the other hand, the identity between the *B. mandarina* enzyme and those from *M. sexta* and human are 70% and 24%, respectively.