# Expression and Localization of *Bombyx mori* V-ATPase 16 kDa Subunit c

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V-ATPase plays a central role in lepidopteran midgut ion transport physiology, and lepidopteran midgut turned out to be a model tissue for the study of V-ATPase. In the present study, the 5'-RACE method is used to obtain the 5'-UTR of V-ATPase c subunit gene from *Bombyx mori*. Sequence analysis of the promoter region and 3'-UTR of V-ATPase c subunit gene revealed that the transcription of the V-ATPase c subunit gene may be regulated by multi-ways. RT-PCR analysis showed that *B. mori* V-ATPase c subunit mRNA expresses in the whole developmental stages of *B. mori*. We also constructed a transient vector to determine the subcellular localization of the *B. mori* V-ATPase c subunit, and the result demonstrated that it is located in the membrane and some specific regions of BmN cells. Real-time PCR analysis further indicated that the c subunit mRNA expression was up-regulated significantly at 24 and 72 h in the midguts of resistant *B. mori* larvae after being inoculated with *B. mori* nucleopolyhedrovirus, suggesting that it may be related to the immune response against virus infection.

*Key words:* V-ATPase Subunit c, *Bombyx mori*, BmNPV