

Molecular Cloning and Expression of CLIC (chloride intracellular channels) Gene of *Bombyx mori*

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Chloride ion channels located both within the plasma membrane and other internal cell membranes, are participated in the control of secretion and absorption of salt, regulation of membrane potentials and cell volume homeostasis. In this study, we obtained a complete cDNA of CLIC (chloride intracellular channels) 1 and gene expression in *Bombyx mori*. Sequence analysis of a 1212 bp full-length cDNA obtained from the embryo cDNA libraries revealed it to contain an open reading frame of 242 amino acid residues consisted of 726 bp. Perfect homology of CLIC 1 were found among wide animals including mammals, amphibians and human. The deduced amino acid sequence of CLIC 1 showed 99% homology with *Rattus norvegicus* (house mouse), *Xenopus laevis* (African frog) and *Homo sapiens* (human). In expression, the transcripts were detected in embryogenesis and larva. The strong expression of CLIC in early embryogenesis gradually declined those of late. The unfertilized eggs, fertilized eggs (0-2hrs after oviposition) and blastoderm formation stage (8-10hrs after oviposition)) have strong expression comparative with the later three time points (germband formation stage (24hrs after oviposition, HCl treatment for artificial hatching), spatula stage (48hrs after oviposition) and appendages formation stage (72hrs after oviposition)). CLIC mRNA could be detected in many tissues of larva, fat body, mid-gut, gonads, silk glands, skin and malpighian tube. These results suggested that CLIC gene is expressed ubiquitously in every developmental stage and organs. To determine the sites of CLIC expression *In situ* hybridization to silk glands at final instar larva was performed.