

Identification of the *Bombyx mori* gene *PIN2/TRF1* codes for telomeric protein

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Pin proteins involved in mitotic regulation. TRF1 is a double strand DNA-binding that negatively regulates telomere elongation. Pin2 and TRF1 are spliced isoforms of the same gene *PIN2/TRF1*. Sequence analysis of *B. mori PIN2/TRF1* has 840 nucleotides full-length cDNA revealed it to contain an ORF of 121 amino acids. The protein aligned with the *PIN2/TRF1* contain a D-like motif similar to the destruction box present in many mitotic proteins. This gene transcripts were detected in early embryogenesis. An early four time points (unfertilized eggs, fertilized eggs (0-2hrs after oviposition) blastoderm formation stage (8-10hrs after oviposition) and germband formation stage (24hrs after oviposition). RNA of this gene could be detected in tissues of larva (fat body, mid-gut, gonads and silk gland) and adults moth. The levels of *PIN2/TRF1* transcripts in germ cells (testis and ovary) are strong comparison with other tissues. *In situ* hybridization to gonads of final instar larva was performed to determine the sites of *PIN2/TRF1* expression. In testis, *PIN2/TRF1* transcription was detected in the whole of cells, spermatogonium, spermatocyte and sperm packet, and membrane.