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Molecular Cloning and characterization of Cyclophilin A cDNA from *Bombyx mori*

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Cyclophilins (Cyps) are a family of proteins that bind the immunosuppressive agent cyclosporin A (CsA) with high-affinity and belong to one of the three superfamilies of peptidyl prolyl cis-*trans* isomerases(PPIase). Recent studies have shown that CsA mediates its immunosuppressive activity through Cyp-dependent calcineurin inactivation. We report the characterization of a novel Cyclophilin A (bCyp A) isolated from *Bombyx mori*. To obtain bCyp A gene from *B. mori*, we have constructed the subtracted library which was screened by hybridization using T(Bm5 cell treated with tunicamycin) and D(normal Bm5 cell) cDNA mixture as probes, respectively. A total of 459 subtractive clones were randomly selected. Among these clones, we have isolated bCyp A gene showing similarity with Cyclophilin of *Human*. A full length cDNA sequence of bCyp A comprised 498bp with 166 amino acid residues. The sequence analysis of Cyp A indicates that the enzyme active site and the binding site for CsA are identical and well conserved in 13 residues that constitute the CsA-binding site, including the Trp residue essential for binding. We report characterization of the cDNA sequence encoding a Cyclophilin A from *Bombyx mori*.