

A Chinese hamster ovary cyclophilin cDNA sequence

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Submitted November 13, 1989

EMBL accession no. X17105

Cyclophilin is an abundant cytosolic protein that binds the immunosuppressive agent, cyclosporin A (1). Cyclophilin has been shown to be identical to the enzyme peptidyl-prolyl *cis-trans* isomerase, the inhibition of which may be involved in the immunosuppressive action of cyclosporin A (2, 3). Here we report the nucleotide and deduced amino acid sequence of a Chinese hamster ovary (CHO) cDNA. This cDNA clone was isolated from a λ ZAP cDNA library derived from CHO cell line RNA using a human cyclophilin (4) cDNA as a probe. The 737 base pairs (bp) cDNA has an open reading frame of 492 bp encoding a protein of 164 amino acids. CHO cyclophilin shares 96.3%, 95.7%, 95.7%, and 97.6% amino acid homology with the known mammalian sequences from human (4), bovine (5), porcine (2, 3), and rat (6), respectively.

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1           GCTGTCCCCTGTGCGCTCTTCTGCAGCCATGGTCAACCCACCGTGTTCCTTC
                                     M V N P T V F F
54          GACATCTCGGCCGACGGCGAGCCCTTGGGCCGCGTCTCCTTCGAGCTATTTGCAGACAAA
          D I S A D G E P L G R V S F E L F A D K
114         GTTCCAAAGACAGCAGAAAACTTTCGAGCTCTGAGCACTGGAGAGAAAGGATTTGGATAT
          V P K T A E N F R A L S T G E K G F G Y
174         AAGGGTTCCTCCTTTCACAGAATTATCCAGGATTCATGTGCCAGGGTGGTGACTTCACA
          K G S S F H R I I P G F M C Q G G D F T
234         CGCCATAATGGCACTGGCGGCAGGTCATCTACGGAGAGAAATTTGAGGATGAGAACTTC
          R H N G T G G R S I Y G E K F E D E N F
294         ATCCTGAAGCATAACAGGTCCTGGCATCTTGCCATGGCAAATGCTGGACCAAACACAAAT
          I L K H T G P G I L S M A N A G P N T N
354         GGTTCCCAGTTTTTTATCTGCACCGCCAAGACTGAGTGGCTGGATGGCAAACATGTGGTC
          G S Q F F I C T A K T E W L D G K H V V
414         TTTGGGAAGGTGAAAGAAGGCATGAACATTGTGGAAGCCATGGAGCGTTTCGGGTCCAGG
          F G K V K E G M N I V E A M E R F G S R
474         AATGGCAAACCAGCAAGAAGATCACCATTTCGACTGTGGGCAACTCTAATCTTTTGA
          N G K T S K K I T I S D C G Q L end
534         CTTGCGGGCTTCTTACCTACCAGACCATTCCTTGTGTAGCTCAGGAGAGCATTCCCACCC
594         CATCTGCTCGAATGCCCTGTAATCTCTGCTCTCACTGAAATCTTTGGGTTCATATTTT
654         CCTCATTCCCCTCCAAGTCTAGCTGGATGGCAGAGTTAAGTTTATGATTGTGAAATAAAA
714         ACTAAGTAAGAAAAAAAAAAAAAAAAA

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