

Recombinant Human Peptidylprolyl Isomerase D, His-tagged

Cat. No. PPID-61H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Cyclophilin-D produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 390 amino acids and having a molecular mass of 42.9 kDa. Cyclophilin-D is fused to His Tag at N-terminus and is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	Cyclophilin-D is a member of the peptidyl-prolyl cis-trans isomerase (PPIase) family. PPIases catalyze the cis-trans isomerization of proline imidic peptide bonds in oligopeptides and speeds up the protein folding. Cyclophilin-D possess PPIase activity and binds to the immunosuppressant cyclosporin-A. Cyclophilin-D is very well known that its overexpression suppresses the apoptosis in cancer cell. Cyclophilin-D suppresses apoptotic cell death by the use of mitochondrial hexokinase-2 dependent mechanism in cancer cells.
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MSHPSQAKP SNPSNPRVFF DVDIGGERVG RIVLELFADI VPKTAENFRA LCTGEKGIGH TTGKPLHFKG CPFHRIKKF MIQGGDFSNQ NGTGGESIYG EKFEDENFHY KHDREGLLSMANAGRNTNGS QFFITTVPTP HLDGKHVVFQ QVIKIGIVAR ILENVEVKGEKPAKLCVIAE CGELKEGDDG GIFPKDGSGD SHPDFPEDAD IDLKDVVKIL LITEDLKNIG NTFFKSQNWE MAIKKYAEVL RYVDSSKAVI ETADRAKLQPIALSCVLNIG ACKLKMSNWQ GAIDSCLEAL ELDPSNTKAL YRRAQGWQGLKEYDQALADL

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KKAQGIAPED KAIQAELLKV KQKIKAQKDK EKAVYAKMFA.

Physical Appearance	Sterile filtered colorless solution.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	1 mg/ml solution containing 1x PBS pH-7.4 & 10% glycerol.
Stability	Recombinant Human Cyclophilin-D although stable at 14°C for 1 week, should be stored desiccated below -18°C. Please prevent freeze thaw cycles.
Biological activity	Specific activity is > 210 nmoles/min/mg, and is defined as the amount of enzyme that cleaves 1umole of suc-AAFP-pNA per minute at 25°C in Tris-Hcl pH8.0 using chymotrypsin.
Activity Assay	1. Prepare 170ul assay buffer into a suitable container and pre-chill on ice before use: The final concentrations are 200 mM Tris-Hcl, pH 8.0, and 20nM chymotrypsin. 2. Add 10ul of recombinant Cyclophilin D protein with 1ug in assay buffer. 3. Mix by inversion and equilibrate to 1°C and monitor the A405nm until the value is constant using a spectrophotometer. 4. Add 20ul pre-chilled 5mM suc-AAFP-pNA. (Substrate was dissolved in TFE that contained 460mM LiCl to a concentration of 3 mM) 5. Record the increase in A405 nm for 30 minutes at 25°C.
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name PPID peptidylprolyl isomerase D [Homo sapiens]

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Synonyms	PPID; peptidylprolyl isomerase D; CYPD; CYP-40; MGC33096; peptidylprolyl isomerase D (cyclophilin D); cyclophilin 40;40 kDa peptidyl-prolyl cis-trans isomerase; PPIase; Rotamase; Cyclophilin-related protein; Cyclophilin-40; CYP40; EC 5.2.1.8; rotamase; cyclophilin D;
Gene ID	5481
mRNA Refseq	NM_005038
Protein Refseq	NP_005029
MIM	601753
UniProt ID	Q08752
Chromosome Location	4q31.3
Pathway	Calcium signaling pathway; Huntington"s disease; Parkinson"s disease
Function	cyclosporin A binding; heat shock protein binding; isomerase activity; peptidyl-prolyl cis-trans isomerase activity

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on 1ihg.



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