

Recombinant Human PPIA, His-tagged

Cat. No. PPIA-60H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human Cyclophilin-A His tag protein produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 185 amino acids and having a molecular mass of 20 kDa. PPIase-A is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	PPIases catalyze the cis-trans isomerization of proline imidic peptide bonds in oligopeptides and accelerate the folding of proteins. Cyclophilin-A is a cyclosporin binding-protein and may play a role in cyclosporin A-mediated immunosuppression. Cyclophilin-A can also interact with several HIV proteins, including p55 gag, Vpr, and capsid protein, and has been shown to be necessary for the formation of infectious HIV virions. Multiple pseudogenes that map to different chromosomes have been reported.
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MVNPTVFFDI AVDGEPLGRV SFELFADKVP KTAENFRALSTGEKGFYK SCFHRIIPGF MCQGGDFTRH NGTGGKSIYG EKFEDENFIL KHTGPGILSMANAGPNTNGS QFFICTAKTE WLDGKHVVFG KVKEGMNIVE AMERFGSRNG KTSKKITIADCGQLE.
Physical Appearance	Sterile filtered colorless solution.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Formulation	1 mg/ml solution containing 20 mM Tris 8.0, 20 mM NaCl, 0.5 mM DTT and 10% glycerol.
Stability	PPIase-A Human Recombinant 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 > 270 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 A 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 +°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	PPIA peptidylprolyl isomerase A (cyclophilin A) [Homo sapiens]
Synonyms	PPIA; peptidylprolyl isomerase A (cyclophilin A); CYPA; CYPH; MGC12404; MGC23397; MGC117158; PPIase A; Rotamase A; Cyclophilin A; Cyclosporin A-binding protein; EC 5.2.1.8; OTTHUMP00000025305; T cell cyclophilin; peptidylprolyl cis-trans isomerase A; peptidylprolyl isomerase A
Gene ID	5478

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mRNA Refseq	NM_021130
Protein Refseq	NP_066953
MIM	123840
UniProt ID	P62937
Chromosome Location	7p13
Pathway	HIV Infection; Hemostasis; Signaling in Immune system
Function	isomerase activity; peptide binding; peptidyl-prolyl cis-trans isomerase activity; peptidyl-prolyl cis-trans isomerase activity; unfolded protein binding; virion binding

PDB rendering based on 1ak4.



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