

## Cyclophilin A Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	peptidylprolyl isomerase A (cyclophilin A);Cphn;CyP-18;2700098C05;CypA
Protein Construction:	A DNA sequence encoding the mouse PPIA (NP_032933.1) (Met 1-Leu 164) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	P17742
Molecular Weight:	18.8 kDa (predicted); 17 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4, 10% glycerol. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**  
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**  
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Peptidyl-prolyl cis-trans isomerase A, also known as PPIase A, Rotamase A, Cyclophilin A, Cyclosporin A-binding protein, PPIA and CYPA, is a cytoplasm protein that belongs to the cyclophilin-type PPIase family and PPIase A subfamily. Cyclophilins (CyPs) are a family of proteins found in organisms ranging from prokaryotes to humans. These molecules exhibit peptidyl-prolyl isomerase activity, suggesting that they influence the conformation of proteins in cells. PPIA / Cyclophilin A accelerate the folding of proteins. It catalyzes the cis-trans isomerization of

proline imidic peptide bonds in oligopeptides. PPIA / Cyclophilin A is secreted by vascular smooth muscle cells in response to inflammatory stimuli, and could thus contribute to atherosclerosis. It is not essential for mammalian cell viability. PPIA / Cyclophilin A can 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.

### Reference

Haendler B., et al.,(1987), Complementary DNA for human T-cell cyclophilin. EMBO J. 6:947-950.

Haendler B., et al., (1990), Characterization of the human cyclophilin gene and of related processed pseudogenes. Eur. J. Biochem. 190:477-482.

Ota T., et al.,(2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.

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