Recombinant PPIF protein (His tag)

Catalog Number	546906
Synonyms	PPIase F; Cyclophilin D; CyP-D; CypD; Cyclophilin F; Mitochondrial cyclophilin; CyP-M; Rotamase F
Species	Human
Expression System	E. coli
Accession	P30405
Molecular Weight	Predictes a molecular mass of 19.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	44-207
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 44-207 aa (P30405) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Peptidyl-prolyl cis-trans isomerase F (PPIase F/Cyclophilin D) Fragment (aa 44-207) - A high-purity protein fragment encompassing the complete PPIase cyclophilin-type domain, ideal for studying mitochondrial protein folding, permeability transition pore regulation, and apoptosis mechanisms. Peptidyl-prolyl cis-trans isomerase F (PPIase F), also known as Cyclophilin D, is a mitochondrial matrix enzyme that catalyzes the cis-trans isomerization of proline imidic peptide bonds, facilitating proper protein folding. This protein plays a critical role in regulating the mitochondrial permeability transition pore (mPTP), where it modulates pore opening probability and contributes to oxidative stress-induced necrosis. Beyond its PPIase activity, Cyclophilin D demonstrates anti-apoptotic functions independent of mPTP regulation and cooperates with BCL2 to inhibit cytochrome c-dependent apoptosis. The protein is also involved in modulating mitochondrial membrane F(1)F(0) ATP synthase activity and regulating mitochondrial matrix adenine nucleotide levels, positioning it as a key regulator of mitochondrial function and cell death pathways.