Cyclophilin F/PPIF Protein, Human (HEK293, His)

Cat. No.:	HY-P74211A
Synonyms:	Peptidyl-prolyl cis-trans isomerase; PPIase; PPIF
Species:	Human
Source:	HEK293
Accession:	P30405 (C30-S207)
Gene ID:	10105
Molecular Weight:	Approximately 24-34 kDa

PROPERTIES

AA Sequence	C S K G S G D P S S S S S S G N P L V Y L D V D A N G K P L G R V V L E L K A D V V P K T A E N F R A L C T G E K G F G Y K G S T F H R V I P S F M C Q A G D F T N H N G T G G K S I Y G S R F P D E N F T L K H V G P G V L S M A N A G P N T N G S Q F F I C T I K T D W L D G K H V V F G H V K E G M D V V K K I E S F G S K S G R T S K K I V I T D C G Q L S
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Cyclophilin F/PPIF Protein functions as a peptidyl-prolyl cis-trans isomerase (PPIase), playing a vital role in catalyzing the cis-trans isomerization of proline imidic peptide bonds in oligopeptides, thereby potentially facilitating protein folding. Beyond its involvement in protein folding, Cyclophilin F/PPIF is a key player in the regulation of the mitochondrial permeability transition pore (mPTP), where its association with the mPTP is suggested to mask a binding site for inhibiting inorganic phosphate (Pi), ultimately promoting the open probability of the mPTP and leading to apoptosis or necrosis; however, the requirement for PPIase activity in this process is a matter of debate. Additionally, in collaboration with mitochondrial p53/TP53, Cyclophilin F/PPIF contributes to the activation of oxidative stress-induced necrosis. It further

participates in modulating mitochondrial membrane F(1)F(0) ATP synthase activity and regulating mitochondrial matrix adenine nucleotide levels. Exhibiting anti-apoptotic activity independently of the mPTP, Cyclophilin F/PPIF, in cooperation with BCL2, effectively inhibits cytochrome c-dependent apoptosis, highlighting its multifaceted roles in mitochondrial function and cell survival mechanisms.

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