

FKBP12 Protein, Mouse (His)

Cat. No.:	HY-P76346
Synonyms:	Peptidyl-prolyl cis-trans isomerase FKBP1A; FKBP-12; Calstabin-1; FKBP-1A; FKBP1
Species:	Mouse
Source:	E. coli
Accession:	P26883 (G2-E108)
Gene ID:	14225
Molecular Weight:	Approximately 13 kDa

PROPERTIES

AA Sequence	G V Q V E T I S P G D G R T F P K R G Q T C V V H Y T G M L E D G K K F D S S R D R N K P F K F T L G K Q E V I R G W E E G V A Q M S V G Q R A K L I I S S D Y A Y G A T G H P G I I P P H A T L V F D V E L L K L E
Biological Activity	Measured by its ability to convert the substrate, Suc-AAPF-pNA, from Cis to Trans formation. The specific activity is 7800 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. 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	<p>FKBP12, a multifunctional protein, plays a crucial role in maintaining the inactive conformation of TGFBR1, the serine/threonine kinase receptor for TGF-beta, thereby preventing receptor activation in the absence of ligand. This regulatory function contributes to the precise control of TGF-beta signaling. Additionally, FKBP12 recruits SMAD7 to ACVR1B, impeding the association of SMAD2 and SMAD3 with the activin receptor complex and effectively blocking activin signaling. Beyond its role in TGF-beta and activin pathways, FKBP12 exhibits versatility by potentially modulating the activity of the RYR1 calcium channel. Acting as a peptidyl-prolyl cis-trans isomerase (PPIase), FKBP12 accelerates protein</p>
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folding by catalyzing the cis-trans isomerization of proline imidic peptide bonds in oligopeptides. This diverse array of functions underscores FKBP12's significance in cellular processes and highlights its involvement in various signaling pathways.

Caution: Product has not been fully validated for medical applications. For research use only.

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