

Recombinant Human FK506 Binding Protein 1A, 12kDa, His-tagged

Cat. No. FKBP1A-503H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human FKBP12 fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography. MW=14.1kDa.
Species	Human
Source	E.coli
ProteinLength	1-108 aa
Description	FK506 binding protein 1a, also known as FKBP12, belongs to the immunophilin protein family, which play a role in immunoregulation and basic cellular processes involving protein folding and trafficking. FKBP12 also plays a role in intracellular calcium regulation by associating with three types of calcium release channel complexes, cardiac and skeletal ryanodine receptors and the inositol 1, 4, 5-trisphosphate receptor. It interacts with several intracellular signal transduction proteins including type I TGF-beta receptor.
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MG VQVETISP GDGRTPFKRG QTCVVHYTGM LEDGKKFDSS RDRNKPFFKM LGKQEVIRGW EEGVAQMSVG QRAKLTISPD YAYGATGHPG IIPPHATLVF DVELLKLE.
From	Liquid. In 20mM Tris-HCl buffer (pH8.0) containing 100mM NaCl, 1mM DTT, 10% glycerol.

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Purity	>95% by SDS–PAGE.
Concentration	1mg/ml (determined by Bradford assay).
Endotoxin Level	<1.0 EU per 1µg of protein (determined by LAL method).
Biological activity	Specific activity is > 300 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 pH 8.0 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 FKBP1a/FKBP12 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 +4°C short term (1-2weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	FKBP1A FK506 binding protein 1A, 12kDa [Homo sapiens]
Synonyms	FKBP1A; FK506 binding protein 1A, 12kDa; FKBP1; PKC12; PKCI2; FKBP12; PPIASE; FKBP-12; FKBP12C; FKBP1A; FK506-binding protein 1A (12kD); Peptidyl-prolyl cis-trans isomerase FKBP1A; PPIase FKBP1A; EC 5.2.1.8; FK506-binding protein 1A; FKBP-1A; Immunophilin FKBP12; 12 kDa FKBP; FKBP-12; OTTHUMP00000029978; Rotamase; rotamase; FK506-binding protein 1; FK506-binding protein 12; FK506-binding protein, T-cell, 12-kD; peptidyl-prolyl cis-trans

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isomerase; protein kinase C inhibitor 2	
Gene ID	2280
mRNA Refseq	NM_000801
Protein Refseq	NP_000792
MIM	186945
UniProt ID	P62942
Chromosome Location	20p13
Function	FK506 binding; FK506 binding; SMAD binding; activin binding; isomerase activity; peptidyl-prolyl cis-trans isomerase activity; ryanodine-sensitive calcium-release channel activity; signal transducer activity; transforming growth factor beta receptor activity; type I transforming growth factor beta receptor binding

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