FKBP1A Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	FKBP1A, Blocking Peptide
Full Product Name	FKBP1A Blocking Peptide
Product Gene Name	FKBP1A blocking peptide
Product Synonym Names	12 kDa FK506-binding protein; 12 kDa FKBP; Calstabin 1; FK506 binding protein 1; FK506 binding protein 12; FK506 binding protein 1A (12kD); FK506 binding protein 1A 12kDa; FK506 binding protein 1A; FK506 binding protein T cell 12 kD; FK506 binding protein, T cell, 12 kD; FK506 binding protein12; FK506-binding protein 1A; FKB1A_HUMAN; FKBP 12; FKBP 1A; FKBP-12; FKBP-1A; FKBP1; FKBP12; FKBP12 Exip3; FKBP12C; fkbp1a; Immunophilin FKBP12; Peptidyl prolyl cis trans isomerase; Peptidyl-prolyl cis-trans isomerase FKBP1A; PKC12; PKCI2; PPIase; PPIase FKBP1A; Protein kinase C inhibitor 2; Rotamase
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	FKBP1A peptide (MBS9625971) is used for blocking the activity of FKBP1A antibody (MBS9607255)
Molecular Weight	11,951 Da
OMIM	186945
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for FKBP1A blocking peptide	Blocking/Control
Related Product Information for FKBP1A blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of FKBP1A blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for FKBP1A purchase	MBS9625971 is a blocking peptide targeting FKBP1A.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FKBP1A. It may not necessarily be applicable to this product.

NCBI GI #	4503725
NCBI GeneID	2280
NCBI Accession #	NP_000792.1

UniProt Primary Accession #	P62942
UniProt Secondary Accession #	P20071; Q4VC47; Q6FGD9; Q6LEU3; Q9H103; Q9H566; D3DVW6
UniProt Related Accession #	P62942
GenBank Nucleotide #	NM_000801.4
NCBI Official Full Name	peptidyl-prolyl cis-trans isomerase FKBP1A isoform a
NCBI Official Synonym Full Names	FK506 binding protein 1A, 12kDa
NCBI Official Symbol	FKBP1A
NCBI Official Synonym Symbols	FKBP1; PKC12; PKCI2; FKBP12; PPIASE; FKBP-12; FKBP-1A
UniProt Protein Name	Peptidyl-prolyl cis-trans isomerase FKBP1A
UniProt Synonym Protein Names	12 kDa FK506-binding protein; 12 kDa FKBP; FKBP-12; Calstabin-1; FK506-binding protein 1A; FKBP-1A; Immunophilin FKBP12; Rotamase
Protein Family	Peptidyl-prolyl cis-trans isomerase
UniProt Gene Name	FKBP1A
UniProt Synonym Gene Names	FKBP1; FKBP12; PPIase FKBP1A; 12 kDa FKBP; FKBP-12; FKBP-1A
UniProt Entry Name	FKB1A_HUMAN
NCBI Protein Information	peptidyl-prolyl cis-trans isomerase FKBP1A; 12 kDa FK506-binding protein; 12 kDa FKBP; FK506 binding protein12; FK506-binding protein 1; FK506-binding protein 12; FK506-binding protein 1A (12kD); FK506-binding protein, T-cell, 12-kD; FKBP12-Exip3; PPIase
NCBI Summary for FKBP1A	The protein encoded by this gene is a member of the immunophilin protein family, which play a role in immunoregulation and basic cellular processes involving protein folding and trafficking. The protein is a cis-trans prolyl isomerase that binds the immunosuppressants FK506 and rapamycin. It interacts with several intracellular signal transduction proteins including type I TGF-beta receptor. It also interacts with multiple intracellular calcium release channels, and coordinates multi-protein complex formation of the tetrameric skeletal muscle ryanodine receptor. In mouse, deletion of this homologous gene causes congenital heart disorder known as noncompaction of left ventricular myocardium. Multiple alternatively spliced variants, encoding the same protein, have been identified. The human genome contains five pseudogenes related to this gene, at least one of which is transcribed. [provided by RefSeq, Sep 2008]

UniProt Comments for FKBP1A	FKBP12: an immunophilin and peptidyl-prolyl cis-trans isomerase that binds to the immunosuppressant drugs FK506 (a.k.a. tacrolimus or Fujimycin) and rapamycin (a.k.a. Sirolimus). The FKBP12/rapamycin complex binds NFAT transcription factors and inhibits the induction of T cell genes including IL-2, IL-3, IL-4, TNF-alpha and GM-CSF. FK506 is used in treating patients after organ transplant and those suffering from autoimmune disorders. The immunosuppressant activity of FKBP12 is not apparently related to its prolyl isomerase activity. The FKBP12/rapamycin complex inhibits the mammalian target of rapamycin (mTOR) pathway by directly binding the mTOR Complex1 (mTORC1). mTORC1 contains Raptor, mLST8, and PRAS40, and interacts with DEPTOR, which inhibits its activity. mTOR, a S/T protein kinase, is a central regulator of cellular growth and metabolism. Its inhibition enhances the dependence on aerobic glycolysis in leukemic cells. Protein type: EC 5.2.1.8; Isomerase Chromosomal Location of Human Ortholog: 20p13 Cellular Component: endoplasmic reticulum membrane; sarcoplasmic reticulum membrane; membrane; cytoplasm; nerve terminal; Z disc; cytosol Molecular Function: signal transducer activity; protein binding; FK506 binding; enzyme binding; protein homodimerization activity; peptidyl-prolyl cis-trans isomerase activity; activin binding; macrolide binding; calcium channel inhibitor activity; Hsp70 protein binding; SMAD binding; transforming growth factor beta receptor binding Biological Process: heart morphogenesis; protein maturation via protein folding; protein peptidyl-prolyl isomerization; protein folding; positive regulation of protein binding; T cell activation; response to caffeine; T cell proliferation; regulation of protein localization; negative regulation of protein amino acid phosphorylation; muscle contraction; transforming growth factor beta receptor signaling pathway; negative regulation of release of sequestered calcium ion into cytosol; fibril organization and biogenesis; ventricular cardiac muscle morphogenesis; protein refolding; response to iron ion; regulation of immune response; positive regulation of I-kappaB kinase/NF-kappaB cascade; cytokine and chemokine mediated signaling pathway; regulation of activin receptor signaling pathway; SMAD protein complex assembly; negative regulation of protein phosphatase type 2B activity; 'de novo' protein folding; positive regulation of protein ubiquitination; release of sequestered calcium ion into cytosol
Research Articles on FKBP1A	**1.** peptidyl prolyl cis-trans isomerase activity of FKBP12 probably plays a role in inhibition of receptor phosphorylation.
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