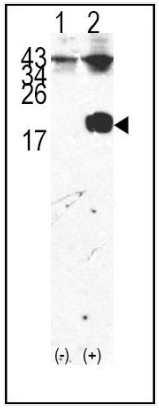
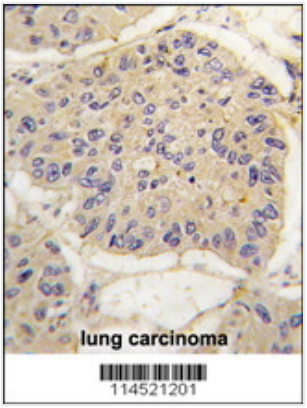
# FKBP1A Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | FKBP1A, Polyclonal Antibody |
| **Full Product Name** | FKBP1A, ID (Peptidyl-prolyl cis-trans Isomerase FKBP1A, PPIase FKBP1A, FK506-binding Protein 1A, FKBP-1A, Rotamase, Immunophilin FKBP12, 12kD FKBP, 12kD FK506-binding Protein, FKBP-12, FKBP1, FKBP12) (HRP) |
| **Product Gene Name** | anti-FKBP1A antibody |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Horseradish Peroxidase (HRP). |
| **Purity/Purification** | Purified by Ammonium Sulfate Precipitation. |
| **Specificity** | Recognizes human FKBP1A. |
| **Preparation and Storage** | Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. |
| **Molecular Weight** | 11,951 Da |
| **OMIM** | 186945 |
| **3D Structure** | ModBase 3D Structure for P62942 |
| **Immunogen** | Synthetic peptide selected from the center region of human FKBP1A (KLH). |
| **Conjugate** | HRP |
| **Note** | Preservative Free |
| **Product Categories/Family for anti-FKBP1A antibody** | Antibodies; Binding Proteins |
| **Applications Tested/Suitable for anti-FKBP1A antibody** | Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB) |
| **Application Notes for anti-FKBP1A antibody** | IHC: 1:10-1:50<br>ELISA: 1:1,000<br>WB: 1:100-1:500<br>Applications are based on unconjugated antibody. |
| **Related Product Information for anti-FKBP1A antibody** | MBS6475971 is an antibody targeting FKBP1A. Also known as FKBP1A, ID (Peptidyl-prolyl cis-trans Isomerase FKBP1A, PPIase FKBP1A, FK506-binding Protein 1A, FKBP-1A, Rotamase, Immunophilin FKBP12, 12kD FKBP, 12kD FK506-binding Protein, FKBP-12, FKBP1, FKBP12) (HRP). Reactive in Human. Host: Rabbit. |
| **Product References and Citations for anti-FKBP1A antibody** | 1. Gerard, M., J. Neurochem. 106(1), 121-133 (2008). 2. Shor, B., Cancer Res. 68(8), 2934-2943 (2008). 3. Jayaraman, T., J. Biol. Chem. 267(14), 9474-9477 (1992). |
| **Other Notes** | Small volumes of anti-FKBP1A antibody 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. |




**Western Blot (WB) of anti-FKBP1A antibody**
Western blot analysis of FKBP12 (arrow) using rabbit polyclonal FKBP12 Antibody (Center). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the FKBP12 gene (Lane 2) (Origene Technologies).




**Immunohistochemistry (IHC) of anti-FKBP1A antibody**
Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with FKBP12 antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

## ADDITIONAL DETAILS

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

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| **NCBI GI #** | 4503725 |
| **NCBI GeneID** | 2280 |
| **NCBI Accession #** | NP_000792 |
| **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 |

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| **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.<br><br>Protein type: EC 5.2.1.8; Isomerase<br><br>Chromosomal Location of Human Ortholog: 20p13<br><br>Cellular Component: endoplasmic reticulum membrane; sarcoplasmic reticulum membrane; membrane; cytoplasm; nerve terminal; Z disc; cytosol<br><br>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<br><br>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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