

## Product Data Sheet

Product Name: FKBP1A Human  
 Cat. No.: GP21625  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	FKBP12; PPIase; Peptidyl-prolyl cis-trans isomerase; Rotamase; FKBP-12; FKBP1; PKC12; PKC12; FKBP12C; FKBP1A; PPIase FKBP1A; FKBP; FKBP-1A.		

**Amino Acid Sequence** The amino acid sequence of recombinant His-tagged FKBP12 is reported as following: MAHHHHHHVMGVQVETISPGDGRTPFKRGQTCVVHYTGMLLEDGKKFDSSRDRNKPFKFMGLGKQEVIRGWEEGVAQMSVGRQAKLTISPD

**Formulation** The FKBP1A protein solution contains 50mM Hepes pH-8.0, 150mM NaCl, 0.5mM EDTA & 1mM sodium azide.

### Introduction

FKBP1A is a 12kDa protein initially discovered on immune cells on the basis of its capability to bind and mediate the intracellular effect of the immunosuppressant FK506. FKBP1A is also known to mediate the action of Rapamycin-immunosuppressive agent. FKBP1A is part of the family of immunophilins, which have in common high affinity for immunosuppressant drugs and a peptidyl-prolyl cis-trans isomerase (PPIase). Activity which participates in folding of proline-containing protein. In the absence of immunosuppressive ligands, FKBP1A is involved in intracellular calcium regulation by associating with 3 types of Ca<sup>2+</sup> release channel complexes: skeletal ryanodine receptors, cardiac ryanodine receptors and the inositol 1,4,5-triphosphate receptor. FKBP1A also interact with TGF- $\beta$  type I receptor exerting an inhibitory effect on the TGF- $\beta$  signaling pathway. FKBP12 plays a role in modulation of ryanodine receptor isoform-1 (ryr-1), a component of the calcium release channel of skeletal muscle sarcoplasmic reticulum. FKBP1A increase the folding of proteins and catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

FKBP1A Human Recombinant fused to N-terminal His-Tag produced in E.Coli is a single, non-glycosylated polypeptide chain purified through a Ni<sup>2+</sup>-affinity chromatography followed by gel filtration.

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

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