

For Research Use Only, Not for use in diagnostic procedures

## Human FKBP12

Human, recombinant protein expressed in *E. coli*.

Cat# CY-R2273

Amount: 100 µg (1 µg/µl x 100µl)  
Lot:**Introduction:**

FKBP12, an abundant, ubiquitously expressed protein of 108 amino acids (in humans), is the primary intracellular rapamycin receptor. FKBP12 appears to be the most important protein in the immunophilin family of FK506 binding proteins with respect to the rapamycin-sensitive signal transduction pathway. Rapamycin is an immunosuppressive drug that binds to the FKBP12 and inhibits this enzymatic activity as prolyl-isomerase. The resultant rapamycin-FKBP12 complex interacts with and inhibits the activity of a 290 kd kinase, termed mammalian target of rapamycin (mTOR).

It was reported that FKBP12 are important regulators of the intracellular Ca<sup>2+</sup>-release channels. FKBP12 is associated with the Ryanodine receptors, RyR1 in skeletal-muscle cells and also interacts with the RyR3 of diaphragm.

**Product Description:**

Full length of human FKBP12, containing an N-terminal GST tag, expressed in *E. coli*. and purified by GSH agarose chromatography.

**Gene Information:**

The gene accession number is NM\_054014

**OMIM:**

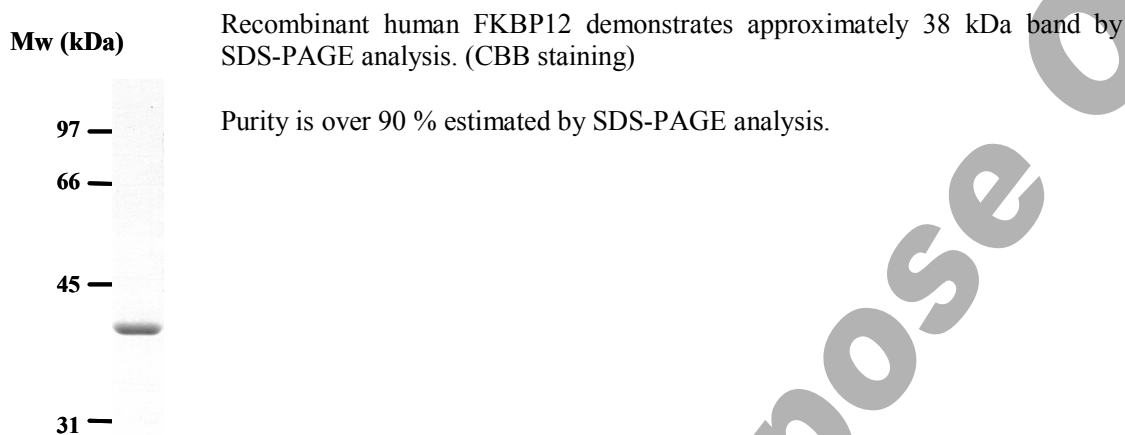
The MIM ID number is \*186945

**Gene Aliases:**

FKBP12 (FKBP1A, PKCI2, CALSTABIN 1)

**Formulation:**

Recombinant human FKBP12 is supplied frozen in phosphate buffered saline (PBS) containing 10 % glycerol.

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Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, AVOID REPEATED HANDLING AND MULTIPLE FREEZE/THAW CYCLES.

**Stability:**

Unopened vial at -70 °C, for 1 year after delivery.

**References:**

1. Standaert, R. F., Galat, A., Verdine, G. L., Schreiber, S. L. Molecular cloning and overexpression of the human FK506-binding protein FKBP. *Nature* 346: 671-674, 1990.
2. Maki, N., Sekiguchi, F., Nishimaki, J., Miwa, K., Hayano, T., Takahashi, N., Suzuki, M. Complementary DNA encoding the human T-cell FK506-binding protein, a peptidylprolyl cis-trans isomerase distinct from cyclophilin. *Proc. Nat. Acad. Sci.* 87: 5440-5443, 1990.
3. Goebel, M. G. The peptidyl-prolyl isomerase, FK506-binding protein, is most likely the 12 kd endogenous inhibitor 2 of protein kinase C. *Cell* 64: 1051-1052, 1991.
4. Jin, Y.-J., Albers, M. W., Lane, W. S., Bierer, B. E., Schreiber, S. L., Burakoff, S. J. Molecular cloning of a membrane-associated human FK506- and rapamycin-binding protein, FKBP-13. *Proc. Nat. Acad. Sci.* 88: 6677-6681, 1991.
5. Wang, T., Donahoe, P. K., Zervos, A. S. Specific interaction of type I receptors of the TGF-beta family with the immunophilin FKBP-12. *Science* 265: 674-676, 1994.
6. Shou, W., Aghdasi, B., Armstrong, D. L., Guo, Q., Bao, S., Charng, M.-J., Mathews, L. M., Schneider, M. D., Hamilton, S. L., Matzuk, M. M. Cardiac defects and altered ryanodine receptor function in mice lacking FKBP12. *Nature* 391: 489-492, 1998.

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**Related Products**

- \* CircuLex Poly-Ubiquitinated Protein Enrichment & Detection Kit: Cat# CY-7001
- \* CircuLex Proteasome Enrichment & Activity Assay Kit: Cat# CY-7002
- \* CircuLex Poly-Ubiquitinated Protein ELISA Kit: Cat# CY-7053

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