FKBP2 (S-12): sc-109940



The Power to Question

BACKGROUND

FKBP2 (FK506-binding protein 2), also known as PPlase (Peptidyl-prolyl *cistrans* isomerase) and FKBP13 (13 kDa FKBP), is a 142 amino acid enzyme that accelerates the folding of proteins. Specifically, FKBP2 catalyzes the *cistrans* isomerization of imidic peptide bonds in oligopeptides. Localized to the endoplasmic reticular membrane, FKBP2 is predominantly expressed in thymus and T cells. FKBP2 is a immunophilin, an intracellular receptor that is inhibited by immunosuppressant drugs such as FK506 and rapamycin. BIG1, a guanine nucleotide exchange factor, and the C-terminus of 4.1G, a protein that stabilizes spectrin-actin binding, interact with FKBP2. The gene encoding FKBP2 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

- Jin, Y.J., et al. 1991. Molecular cloning of a membrane-associated human FK506- and rapamycin-binding protein, FKBP-13. Proc. Natl. Acad. Sci. USA 88: 6677-6681.
- DiLella, A.G., et al. 1992. Chromosomal band assignments of the genes encoding human FKBP12 and FKBP13. Biochem. Biophys. Res. Commun. 189: 819-823.
- 3. Grimmond, S., et al. 1995. Exclusion of the 13 kDa rapamycin binding protein gene (FKBP2) as a candidate gene for multiple endocrine neoplasia type 1. Hum. Genet. 95: 455-458.
- 4. Courseaux, A., et al. 1996. Definition of the minimal MEN1 candidate area based on a 5-Mb integrated map of proximal 11q13. The European Consortium on Men1, (GENEM 1; Groupe d'Etude des Néoplasies Endocriniennes Multiples de type 1). Genomics 37: 354-365.
- Lemmens, I., et al. 1997. Construction of a 1.2-Mb sequence-ready contig of chromosome 11q13 encompassing the multiple endocrine neoplasia type 1 (MEN1) gene. The European Consortium on Men1. Genomics 44: 94-100.
- 6. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 186946. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 7. Padilla, P.I., et al. 2003. Interaction of FK506-binding protein 13 with brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1): effects of FK506. Proc. Natl. Acad. Sci. USA 100: 2322-2327.
- 8. Pinto, D., et al. 2008. Identification of all FK506-binding proteins from *Neurospora crassa*. Fungal Genet. Biol. 45: 1600-1607.

CHROMOSOMAL LOCATION

Genetic locus: FKBP2 (human) mapping to 11q13.1; Fkbp2 (mouse) mapping to 19 A.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

FKBP2 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FKBP2 of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109940 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FKBP2 (S-12) is recommended for detection of FKBP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FKBP2 (S-12) is also recommended for detection of FKBP2 in additional species, including bovine and porcine.

Suitable for use as control antibody for FKBP2 siRNA (h): sc-96608, FKBP2 siRNA (m): sc-145191, FKBP2 shRNA Plasmid (h): sc-96608-SH, FKBP2 shRNA Plasmid (m): sc-145191-SH, FKBP2 shRNA (h) Lentiviral Particles: sc-96608-V and FKBP2 shRNA (m) Lentiviral Particles: sc-145191-V.

Molecular Weight of FKBP2: 13/16 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



Try **FKBP2 (D-9): sc-390753**, our highly recommended monoclonal alternative to FKBP2 (S-12).

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