

FKBP51 (F-13): sc-11514

BACKGROUND

The immunophilins are a highly conserved family of *cis-trans* peptidyl-prolyl isomerases that bind to and mediate the effects of immunosuppressive drugs, such as cyclosporin, FK506 and Rapamycin. Several related immunophilins, FKBP12, FKBP51 and FKBP52, are characterized as cytosolic FK506-binding proteins, and following ligand binding, they functionally inhibit the phosphatase activity of calcineurin. The ubiquitously expressed FKBP12 also associates with the cytoplasmic domain of the TGF β -type I receptor, where it stabilizes the inactive conformation of the receptor and blocks the activation of the TGF β pathway. FKBP51 and FKBP52 are two highly related proteins. FKBP51 is predominantly expressed in T cells and is induced by glucocorticoids. FKBP51 mediates the effects of FK506 and Rapamycin by inhibiting intracellular calcineurin activity, and by blocking T cell activation and proliferation. FKBP52, known also as FKBP59 or heat shock protein 56, is expressed in a variety of tissues and can also associate with the heat shock protein HSP 90 in mature steroid receptor complexes.

CHROMOSOMAL LOCATION

Genetic locus: FKBP5 (human) mapping to 6p21.31; Fkbp5 (mouse) mapping to 17 A3.3.

SOURCE

FKBP51 (F-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FKBP51 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-11514 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FKBP51 (F-13) is recommended for detection of FKBP51 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FKBP51 siRNA (h): sc-35380, FKBP51 siRNA (m): sc-35381, FKBP51 shRNA Plasmid (h): sc-35380-SH, FKBP51 shRNA Plasmid (m): sc-35381-SH, FKBP51 shRNA (h) Lentiviral Particles: sc-35380-V and FKBP51 shRNA (m) Lentiviral Particles: sc-35381-V.

Molecular Weight of FKBP51: 51 kDa.

Positive Controls: FKBP51 (h): 293T Lysate: sc-111980, rat thymus extract: sc-2401 or HeLa whole cell lysate: sc-2200.

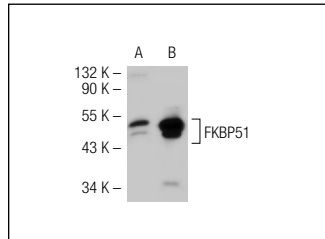
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

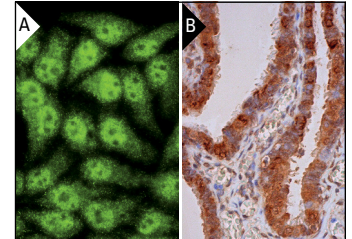
RESEARCH USE

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

DATA



FKBP51 (F-13): sc-11514. Western blot analysis of FKBP51 expression in non-transfected: sc-117752 (A) and human FKBP51 transfected: sc-111980 (B) 293T whole cell lysates.



FKBP51 (F-13): sc-11514. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear and cytoplasmic staining of glandular cell (B).

SELECT PRODUCT CITATIONS

- Yoshida, N.L., et al. 2002. Analysis of gene expression patterns during glucocorticoid-induced apoptosis using oligonucleotide arrays. *Biochem. Biophys. Res. Commun.* 293: 1254-1261.
- Bock, O., et al. 2004. Constitutive expression of the FK506 binding protein 51 (FKBP51) in bone marrow cells and megakaryocytes derived from idiopathic myelofibrosis and non-neoplastic haematopoiesis. *Eur. J. Haematol.* 72: 239-244.
- Shen, L., et al. 2004. Identification of novel direct transcriptional targets of glucocorticoid receptor. *Leukemia* 18: 1850-1856.
- Romano, S., et al. 2010. Role of FK506-binding protein 51 in the control of apoptosis of irradiated melanoma cells. *Cell Death Differ.* 17: 145-157.
- Romano, S., et al. 2010. FK506-binding protein 51 is a possible novel tumoral marker. *Cell Death Dis.* 1: e55.
- Hinzey, A., et al. 2011. Respiratory syncytial virus represses glucocorticoid receptor-mediated gene activation. *Endocrinology* 152: 483-494.
- Kimura, M., et al. 2013. Role of FK506 binding protein 5 (FKBP5) in osteoclast differentiation. *Mod. Rheumatol.* 23:1133-1139.
- Romano, S., et al. 2013. FK506 binding protein 51 positively regulates melanoma stemness and metastatic potential. *Cell Death Dis.* 4: e578.

PROTOCOLS

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