

FKBP51 (H-100): sc-13983

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 FKBP-59 or heat shock protein 56, is expressed in a variety of tissues and can also associate with the heat shock protein (hsp90) in mature steroid receptor complexes.

CHROMOSOMAL LOCATION

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

SOURCE

FKBP51 (H-100) is a rabbit polyclonal antibody raised against amino acids 358-457 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.

APPLICATIONS

FKBP51 (H-100) 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

FKBP51 (H-100) is also recommended for detection of FKBP51 in additional species, including equine, canine, bovine and porcine.

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: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or mouse thymus extract: sc-2406.

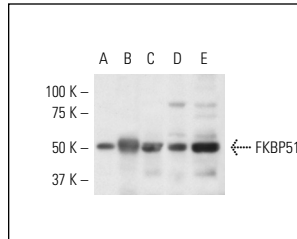
STORAGE

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

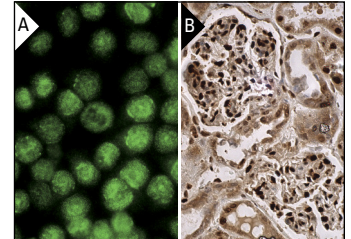
RESEARCH USE

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

DATA



FKBP51 (H-100): sc-13983. Western blot analysis of FKBP51 expression in mouse thymus (A) and rat thymus (B) tissue extracts and HeLa (C), Ca Ski (D) and Jurkat (E) whole cell lysates.



FKBP51 (H-100): sc-13983. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing strong nuclear staining and moderate cytoplasmic staining of glomerular cells and cells in tubules (B).

SELECT PRODUCT CITATIONS

1. Billing, A.M., et al. 2007. Proteomic analysis of the cortisol-mediated stress response in THP-1 monocytes using DIGE technology. *J. Mass Spectrom.* 42: 1433-1444.
2. Makkonen, H., et al. 2008. Identification of ETS-like transcription factor 4 as a novel androgen receptor target in prostate cancer cells. *Oncogene* 27: 4865-4876.
3. Makkonen, H., et al. 2009. Long-range activation of FKBP51 transcription by the androgen receptor via distal intronic enhancers. *Nucleic Acids Res.* 37: 4135-4148.
4. 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.
5. Billing, A.M., et al. 2011. Cortisol is a potent modulator of lipopolysaccharide-induced interferon signaling in macrophages. *Innate Immun.* 17: 302-320.
6. Sekizawa, N., et al. 2011. Transcriptome analysis of aldosterone-regulated genes in human vascular endothelial cell lines stably expressing mineralocorticoid receptor. *Mol. Cell. Endocrinol.* 341: 78-88.
7. Billing, A.M., et al. 2012. Proteomic profiling of rapid non-genomic and concomitant genomic effects of acute restraint stress on rat thymocytes. *J. Proteomics* 75: 2064-2079.
8. Romano, S., et al. 2013. FK506 binding protein 51 positively regulates melanoma stemness and metastatic potential. *Cell Death Dis.* 4: e578.


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Try **FKBP51 (D-4): sc-271547**, our highly recommended monoclonal alternative to FKBP51 (H-100).