

FKBP12 (N-19): sc-6174

BACKGROUND

Immunophilins are a highly conserved family of *cis-trans* peptidyl-prolyl isomerases which bind to and mediate the effects of immunosuppressive drugs such as cyclosporin, FK506 and Rapamycin. The prototypic member of the family, FKBP12, was originally identified as a target of FK506 and Rapamycin activity. FKBP12 is an abundant, evolutionarily conserved cytoplasmic protein. Although the molecular role of FKBP12 activity is not well understood, the protein has been implicated as a regulator of diverse array of cellular processes including T cell activation, entry into the cell cycle and intracellular calcium release. Interestingly, FKBP12 has been shown to associate with the intracellular cytoplasmic domain of the type I TGF β receptor. This association is constitutive and not dependent on the activation of the receptor.

CHROMOSOMAL LOCATION

Genetic locus: FKBP1A (human) mapping to 20p13, FKBP1B (human) mapping to 2p23.3; Fkbp1a (mouse) mapping to 2 G3, Fkbp1b (mouse) mapping to 12 A1.1.

SOURCE

FKBP12 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of FKBP12 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-6174 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FKBP12 (N-19) is recommended for detection of FKBP12 and FKBP12.6 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).

FKBP12 (N-19) is also recommended for detection of FKBP12 and FKBP12.6 in additional species, including canine, bovine, porcine and avian.

Molecular Weight of FKBP12/FKBP12.6: 12 kDa.

Positive Controls: U-937 cell lysate: sc-2239, mouse brain extract: sc-2253 or FKBP12 (m): 293T Lysate: sc-126858.

STORAGE

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

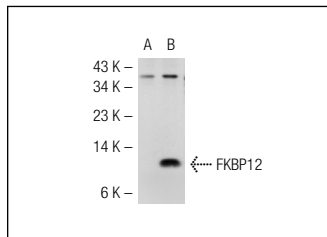
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

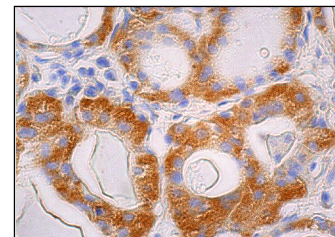
RESEARCH USE

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

DATA



FKBP12 (N-19): sc-6174. Western blot analysis of FKBP12 expression in non-transfected: sc-117752 (A) and mouse FKBP12 transfected: sc-126858 (B) 293T whole cell lysates.



FKBP12 (N-19): sc-6174. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Cunningham, E.B., et al. 1999. An inositolphosphate-binding immunophilin, IPBP12. *Blood* 94: 2778-2789.
- George, C.H., et al. 2003. Ryanodine receptor mutations associated with stress-induced ventricular tachycardia mediate increased calcium release in stimulated cardiomyocytes. *Circ. Res.* 93: 531-540.
- Smith, K.D., et al. 2003. Delayed graft function and cast nephropathy associated with tacrolimus plus rapamycin use. *J. Am. Soc. Nephrol.* 14: 1037-1045.
- Eckstein, L.A., et al. 2005. Cyclosporin A inhibits calcineurin/nuclear factor of activated T-cells signaling and induces apoptosis in retinoblastoma cells. *Invest. Ophthalmol. Vis. Sci.* 46: 782-790.
- Kihira, T., et al. 2005. Expression of FKBP12 and ryanodine receptors (RyRs) in the spinal cord of MND patients. *Amyotroph. Lateral Scler. Other Motor Neuron Disord.* 6: 94-99.
- Giordano, A., et al. 2008. FK506 can activate transforming growth factor- β signalling in vascular smooth muscle cells and promote proliferation. *Cardiovasc. Res.* 79: 519-526.
- Romano, S., et al. 2008. The effect of FK506 on transforming growth factor β signaling and apoptosis in chronic lymphocytic leukemia B cells. *Haematologica* 93: 1039-1048.
- 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. 2013. FK506 binding protein 51 positively regulates melanoma stemness and metastatic potential. *Cell Death Dis.* 4: e578.



Try **FKBP12 (H-5): sc-133067** or **FKBP12 (G-4): sc-136962**, our highly recommended monoclonal alternatives to FKBP12 (N-19).