

FKBP10 (25): sc-135907

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, FK-506 and Rapamycin. Immunophilins have also been implicated in protein folding and trafficking within the endoplasmic reticulum (ER). FKBP10 (FK-506-binding protein 10), also known as peptidyl-prolyl *cis-trans* isomerase, PPlase, Rotamase, 65 kDa FK-506-binding protein or FKBP65, is a 582 amino acid immunophilin localized to the ER lumen and found in many tissues including heart, spleen, brain, testis and lung. FKBP10 contains two EF-hand calcium-binding domains and four PPlase FKBP-type domains, suggesting an enzymatic role in protein folding by catalyzing the *cis-trans* isomerization of proline imidic peptide bonds in oligopeptides. FKBP10 also acts as a receptor for the immunosuppressants FK-506 and Rapamycin, which inhibit FKBP10 activity. FKBP10 is thought to interact with the Raf-1/HSP 90 heterocomplex during signal transduction processes, and may associate with elastin during elastin protein folding and transport. With a Valine 24 addition to human FKBP10, human and mouse FKBP10 are almost identical.

REFERENCES

1. Coss, M.C., et al. 1995. Molecular cloning, DNA sequence analysis, and biochemical characterization of a novel 65 kDa FK-506-binding protein (FKBP65). *J. Biol. Chem.* 270: 29336-29341.
2. Coss, M.C., et al. 1998. The immunophilin FKBP65 forms an association with the serine/threonine kinase c-Raf-1. *Cell Growth Differ.* 9: 41-48.
3. Davis, E.C., et al. 1998. Identification of tropoelastin as a ligand for the 65 kDa FK-506-binding protein, FKBP65, in the secretory pathway. *J. Cell Biol.* 140: 295-303.
4. Göthel, S.F. and Marahiel, M.A. 1999. Peptidyl-prolyl *cis-trans* isomerases, a superfamily of ubiquitous folding catalysts. *Cell. Mol. Life Sci.* 55: 423-436.
5. Patterson, C.E., et al. 2000. Developmental regulation of FKBP65. An ER-localized extracellular matrix binding-protein. *Mol. Biol. Cell* 11: 3925-3935.
6. Patterson, C.E., et al. 2002. Genomic organization of mouse and human 65 kDa FK-506-binding protein genes and evolution of the FKBP multigene family. *Genomics* 79: 881-889.

CHROMOSOMAL LOCATION

Genetic locus: FKBP10 (human) mapping to 17q21.2; Fkbp10 (mouse) mapping to 11 D.

SOURCE

FKBP10 (25) is a mouse monoclonal antibody raised against amino acids 434-576 of FKBP10 of mouse origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

RESEARCH USE

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

APPLICATIONS

FKBP10 (25) is recommended for detection of FKBP10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

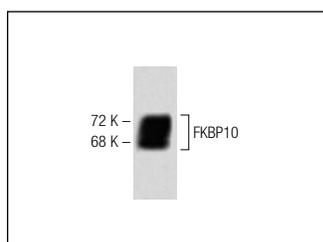
Suitable for use as control antibody for FKBP10 siRNA (h): sc-75019, FKBP10 siRNA (m): sc-75020, FKBP10 shRNA Plasmid (h): sc-75019-SH, FKBP10 shRNA Plasmid (m): sc-75020-SH, FKBP10 shRNA (h) Lentiviral Particles: sc-75019-V and FKBP10 shRNA (m) Lentiviral Particles: sc-75020-V.

Molecular Weight of FKBP10: 65 kDa.

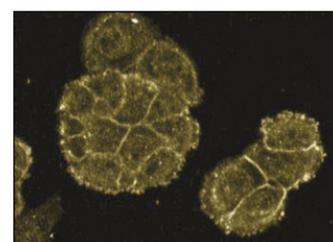
Molecular Weight of glycosylated FKBP10: 68-72 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or SW-13 cell lysate: sc-24778.

DATA



FKBP10 (25): sc-135907. Western blot analysis of FKBP10 expression in SW13 whole cell lysate.



FKBP10 (25): sc-135907. Immunofluorescence staining of A-431 cells showing cytoplasmic and membrane localization.

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 for detailed protocols and support products.