FKBP12 (m): 293T Lysate: sc-126858



The Power to Question

BACKGROUND

Immunophilins are a highly conserved family of $\it{cis-trans}$ 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 a 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.

REFERENCES

- Clardy, J. 1995. The chemistry of signal transduction. Proc. Natl. Acad. Sci. USA 92: 56-61.
- Brown, E.J., Beal, P.A., Keith, C.T., Chen, J., Shin, T.B. and Schreiber, S.L. 1995. Control of p70 S6 kinase by kinase activity of FRAP in vivo. Nature 377: 441-446.
- Cardenas, M.E., Zhu, D. and Heitman, J. 1995. Molecular mechanisms of immunosuppression by cyclosporine, FK506, and Rapamycin. Curr. Opin. Nephrol. Hypertens. 4: 472-477.
- 4. Fruman, D.A., Bierer, B.E., Benes, J.E., Burakoff, S.J., Austen, K.F. and Katz, H.R. 1995. The complex of FK506-binding protein 12 and FK506 inhibits calcineurin phosphatase activity and IgE activation-induced cytokine transcripts, but not exocytosis, in mouse mast cells. J. Immunol. 154: 1846-1851.
- 5. Choi, J., Chen, J., Schreiber, S.L. and Clardy, J. 1996. Structure of the FKBP12-Rapamycin complex interacting with the binding domain of human FRAP. Science 273: 239-242.
- Marks, A.R. 1996. Cellular functions of immunophilins. Physiol. Rev. 76: 631-649.
- 7. Okadome, T., Oeda, E., Saitoh, M., Ichijo, H., Moses, H.L., Miyazono, K. and Kawabata, M. 1996. Characterization of the interaction of FKBP12 with the transforming growth factor β type I receptor *in vivo*. J. Biol. Chem. 271: 21687-21690.

CHROMOSOMAL LOCATION

Genetic locus: Fkbp1a (mouse) mapping to 2 G3.

PRODUCT

FKBP12 (m): 293T Lysate represents a lysate of mouse FKBP12 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

FKBP12 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive FKBP12 antibodies. Recommended use: 10-20 µl per lane.

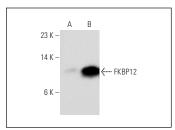
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

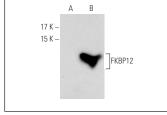
FKBP12 (H-5): sc-133067 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse FKBP12 expression in FKBP12 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA





FKBP12 (H-5): sc-133067. Western blot analysis of FKBP12 expression in non-transfected: sc-117752 (**A**) and mouse FKBP12 transfected: sc-126858 (**B**) 293T whole cell Ivsates.

FKBP12 (G-4): sc-136962. Western blot analysis of FKBP12 expression in non-transfected: sc-117752 (A) and mouse FKBP12 transfected: sc-126858 (B) 293T whole cell I vsates.

RESEARCH USE

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

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com