SANTA CRUZ BIOTECHNOLOGY, INC.

REPS2 (K-18): sc-100825

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

REPS2, a cytoplasmic protein, is primarily expressed in cerebellum, lung, testis, cerebrum and kidney. REPS2 forms as complex with DDEF1 and then binds to paxillin. It can also form a complex with activated RAL, which interacts with the Rho subfamily member Cdc42, and with Ral BP-1, which is involved in growth factor signaling via its influence on the RAL signaling pathway. The NFκB subunit p65 interacts with the EH domain of REPS2, and an upregulation of NFκB activity correlates with a downregulation of REPS2 activity. Decreased expression of REPS2 during progression cancer cells may lead to loss of control of growth factor signalling and thus, loss of control of cell proliferation. REPS2 may also be an important factor in cancer cell resistance to apoptosis.

REFERENCES

1. Ikeda, M., et al. 1998. Identification and characterization of a novel protein interacting with Ral-binding protein 1, a putative effector protein of Ral. J. Biol. Chem. 273: 814-821.
2. Oshiro, T., et al. 2002. Interaction of POB1, a downstream molecule of small G protein Ral, with PAG2, a paxillin-binding protein, is involved in cell migration. J. Biol. Chem. 277: 38618-38626.
3. Oosterhoff, J.K., et al. 2003. REPS2/POB1 is downregulated during human prostate cancer progression and inhibits growth factor signalling in prostate cancer cells. Oncogene 22: 2920-2925.
4. Huang, K.M., et al. 2004. Organization and annotation of the Xcat critical region: elimination of seven positional candidate genes. Genomics 83: 893-901.
5. Penninkhof, F., et al. 2004. Identification of REPS2 as a putative modulator of NFκB activity in prostate cancer cells. Oncogene 23: 5607-5615.
6. Oosterhoff, J.K. et al. 2005. EGF signalling in prostate cancer cell lines is inhibited by a high expression level of the endocytosis protein REPS2. Int. J. Cancer. 113: 561-567.
7. Sugiyama, S., et al. 2005. Ubiquitin-interacting motifs of Epsin are involved in the regulation of Insulin-dependent endocytosis. J. Biochem. 137: 355-364.
8. Yadav, S., et al. 2005. POB1 over-expression inhibits RLIP76-mediated transport of glutathione-conjugates, drugs and promotes apoptosis. Biochem. Biophys. Res. Commun. 328: 1003-1009.

CHROMOSOMAL LOCATION

Genetic locus: REPS2 (human) mapping to Xp22.2; Reps2 (mouse) mapping to X F4.

SOURCE

REPS2 (K-18) is a mouse monoclonal antibody raised against recombinant REPS2 of human origin.

PROTOCOLS

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

PRODUCT

Each vial contains 200 µl ascites containing IgM with < 0.1% sodium azide.

APPLICATIONS

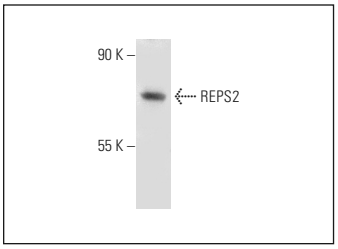
REPS2 (K-18) is recommended for detection of REPS2 of mouse, rat and human origin by Western Blotting (starting dilution: to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:5000).

Suitable for use as control antibody for REPS2 siRNA (h): sc-61454, REPS2 siRNA (m): sc-61455, REPS2 shRNA Plasmid (h): sc-61454-SH, REPS2 shRNA Plasmid (m): sc-61455-SH, REPS2 shRNA (h) Lentiviral Particles: sc-61454-V and REPS2 shRNA (m) Lentiviral Particles: sc-61455-V.

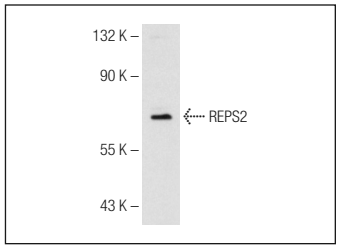
Molecular Weight of REPS2: 78 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, T-47D whole cell lysate: sc-364193 or LNCaP cell lysate: sc-2231.

DATA



REPS2 (K-18): sc-100825. Western blot analysis of REPS2 expression in LNCaP whole cell lysate.



REPS2 (K-18): sc-100825. Western blot analysis of REPS2 expression in T-47D whole cell lysate.

SELECT PRODUCT CITATIONS

1. Rodriguez-Rocha, H., et al. 2012. Glutaredoxin 1 protects dopaminergic cells by increased protein glutathionylation in experimental Parkinson's disease. Antioxid. Redox Signal. 17: 1676-1693.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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