SANTA CRUZ BIOTECHNOLOGY, INC.

RB3 (B-3): sc-376936

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Op18 (for oncoprotein 18, also designated Stathmin, prosolin or metablastin) is a conserved, tubulin-associated, intracellular protein. It serves as a transducing protein, via phosphorylation, for a variety of cell signaling pathways and is involved in both mitosis and differentiation. Op18 is present in many cancers, including breast carcinoma and different leukemias. The neuronal growth-associated protein (nGAP) Stathmin-2, which shares sequence homology with the phosphoprotein Op18/Stathmin-1, is expressed in a variety of neural, immune and reproductive system cell types. Stathmin-2 gene expression is altered in age-related neurodegenerative diseases such as Alzheimer's disease. Stathmin-4 (also designated Stathmin-like protein B3 or RB3) is a Stathmin-like protein involved in the destabilization of microtubules, specifically in brain tissue. RB3 has a unique N-terminal membrane-associated domain and a Stathmin-like domain at the C-terminus. This C-terminal domain promotes microtubule destabilization and Tubulin sequestering.

REFERENCES

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2. Iancu-Rubin, C., Nasrallah, C.A. and Atweh, G.F. 2005. Stathmin prevents the transition from a normal to an endomitotic cell cycle during megakaryocytic differentiation. Cell Cycle 4: 1774-1782.
3. Shumyatsky, G.P., Malleret, G., Shin, R.M., Takizawa, S., Tully, K., Tsvetkov, E., Zakharenko, S.S., Joseph, J., Vronskaya, S., Yin, D., Schubart, U.K., Kandel, E.R. and Bolshakov, V.Y. 2005. Stathmin, a gene enriched in the amygdala, controls both learned and innate fear. Cell 123: 697-709.
4. Giampietro, C., Luzzati, F., Gambarotta, G., Giacobini, P., Boda, E., Fasolo, A. and Perroteau, I. 2005. Stathmin expression modulates migratory properties of GN-11 neurons *in vitro*. Endocrinology 146: 1825-1834.

CHROMOSOMAL LOCATION

Genetic locus: STMN4 (human) mapping to 8p21.2; Stmn4 (mouse) mapping to 14 D1.

SOURCE

RB3 (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 61-95 within an internal region of RB3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376936 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

RB3 (B-3) is recommended for detection of RB3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RB3 siRNA (h): sc-40784, RB3 siRNA (m): sc-40785, RB3 shRNA Plasmid (h): sc-40784-SH, RB3 shRNA Plasmid (m): sc-40785-SH, RB3 shRNA (h) Lentiviral Particles: sc-40784-V and RB3 shRNA (m) Lentiviral Particles: sc-40785-V.

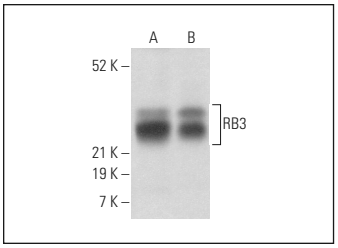
Molecular Weight of RB3: 29 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RB3 (B-3): sc-376936. Western blot analysis of RB3 expression in mouse brain (**A**) and rat brain (**B**) tissue extracts.

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.