SANTA CRUZ BIOTECHNOLOGY, INC.

RhebL1 (A-2): sc-515057

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The Power to Question

BACKGROUND

RhebL1 (Ras homolog enriched in brain-like protein 1), also known as Rheb2 or GTPase RhebL1, is a 183 amino acid protein that belongs to the small GTPase superfamily and Rheb family. Localizing to the cell membrane as well as the cytoplasm, RhebL1 is ubiquitously expressed and is increased two-fold in many tumor cell lines. RhebL1 exhibits GTPase activity and may activate NFκB-mediated gene transcription. Regulating the activity of Rictor, RhebL1 also promotes signal transduction. RhebL1 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 12q13.12 and mouse chromosome 15 F1. Human chromosome 12 encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Allen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. Am. J. Med. Genet. 63: 250-256.
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3. Tee, A.R., et al. 2005. Analysis of mTOR signaling by the small G-proteins, Rheb and RhebL1. FEBS Lett. 579: 4763-4768.
4. Basso, A.D., et al. 2005. The farnesyl transferase inhibitor (FTI) SCH66336 (lonafarnib) inhibits Rheb farnesylation and mTOR signaling. Role in FTI enhancement of taxane and tamoxifen anti-tumor activity. J. Biol. Chem. 280: 31101-31108.
5. Yuan, J., et al. 2005. Identification and characterization of RHEBL1, a novel member of Ras family, which activates transcriptional activities of NFκB. Mol. Biol. Rep. 32: 205-214.
6. Robb, V.A., et al. 2007. Activation of the mTOR signaling pathway in renal clear cell carcinoma. J. Urol. 177: 346-352.
7. Bonneau, A. and Parmar, N. 2012. Effects of RhebL1 silencing on the mTOR pathway. Mol. Biol. Rep. 39: 2129-2137.

CHROMOSOMAL LOCATION

Genetic locus: RHEBL1 (human) mapping to 12q13.12.

SOURCE

RhebL1 (A-2) is a mouse monoclonal antibody raised against amino acids 1-40 mapping at the N-terminus of RhebL1 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.

RESEARCH USE

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

APPLICATIONS

RhebL1 (A-2) is recommended for detection of RhebL1 of 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 RhebL1 siRNA (h): sc-95811, RhebL1 shRNA Plasmid (h): sc-95811-SH and RhebL1 shRNA (h) Lentiviral Particles: sc-95811-V.

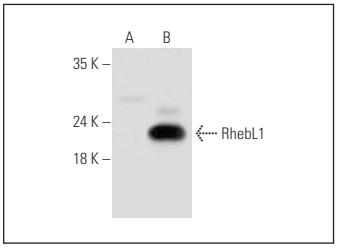
Molecular Weight of RhebL1 isoforms 1/2: 21/8 kDa.

Positive Controls: RhebL1 (h): 293T Lysate: sc-114548.

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



RhebL1 (A-2): sc-515057. Western blot analysis of RhebL1 expression in non-transfected: sc-117752 (**A**) and human RhebL1 transfected: sc-114548 (**B**) 293T whole cell lysates.

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.