SANTA CRUZ BIOTECHNOLOGY, INC.

RhebL1 (F-5): sc-514095

SANTA CRUZ BIOTECHNOLOGY

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.
2. Tabancay, A.P., et al. 2003. Identification of dominant negative mutants of Rheb GTPase and their use to implicate the involvement of human Rheb in the activation of p70S6K. J. Biol. Chem. 278: 39921-39930.

CHROMOSOMAL LOCATION

Genetic locus: RHEBL1 (human) mapping to 12q13.12; Rhebl1 (mouse) mapping to 15 F1.

SOURCE

RhebL1 (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 159-179 near the C-terminus of RhebL1 of human origin.

PRODUCT

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

RhebL1 (F-5) is available conjugated to agarose (sc-514095 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514095 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514095 PE), fluorescein (sc-514095 FITC), Alexa Fluor® 488 (sc-514095 AF488), Alexa Fluor® 546 (sc-514095 AF546), Alexa Fluor® 594 (sc-514095 AF594) or Alexa Fluor® 647 (sc-514095 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514095 AF680) or Alexa Fluor® 790 (sc-514095 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514095 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

RhebL1 (F-5) is recommended for detection of RhebL1 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), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (m): sc-152852, RhebL1 shRNA Plasmid (h): sc-95811-SH, RhebL1 shRNA Plasmid (m): sc-152852-SH, RhebL1 shRNA (h) Lentiviral Particles: sc-95811-V and RhebL1 shRNA (m) Lentiviral Particles: sc-152852-V.

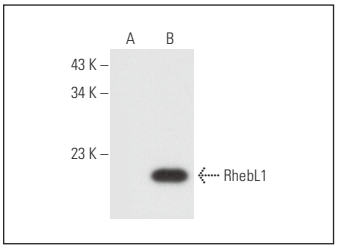
Molecular Weight of RhebL1 isoform 1/2: 21/8 kDa.

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

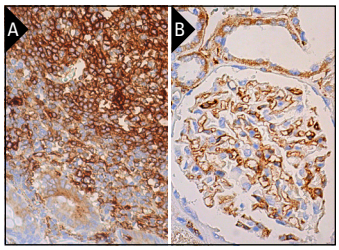
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RhebL1 (F-5): sc-514095. Western blot analysis of RhebL1 expression in non-transfected: sc-117752 (**A**) and human RhebL1 transfected: sc-114548 (**B**) 293T whole cell lysates.



RhebL1 (F-5): sc-514095. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and membrane and cytoplasmic staining of lymphoid cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic and nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Hwang, J.H., et al. 2022. TAZ links exercise to mitochondrial biogenesis via mitochondrial transcription factor A. Nat. Commun. 13: 653.

RESEARCH USE

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