

# RhebL1 (h): 293T Lysate: sc-114548

## 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 NF $\kappa$ B-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

- Allen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. *Am. J. Med. Genet.* 63: 250-256.
- 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.
- Tee, A.R., et al. 2005. Analysis of mTOR signaling by the small G-proteins, Rheb and RhebL1. *FEBS Lett.* 579: 4763-4768.
- 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.
- Yuan, J., et al. 2005. Identification and characterization of RHEBL1, a novel member of Ras family, which activates transcriptional activities of NF $\kappa$ B. *Mol. Biol. Rep.* 32: 205-214.
- Robb, V.A., et al. 2007. Activation of the mTOR signaling pathway in renal clear cell carcinoma. *J. Urol.* 177: 346-352.

## CHROMOSOMAL LOCATION

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

## PRODUCT

RhebL1 (h): 293T Lysate represents a lysate of human RhebL1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

RhebL1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RhebL1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

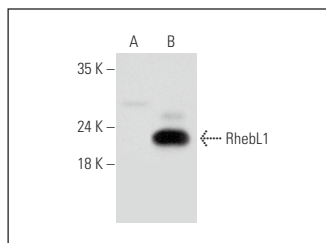
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RhebL1 (A-2): sc-515057 is recommended as a positive control antibody for Western Blot analysis of enhanced human RhebL1 expression in RhebL1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

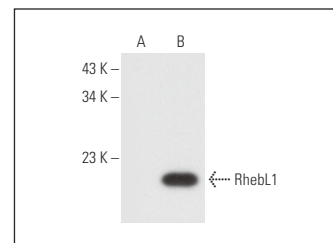
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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.

## 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.



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.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.