SANTA CRUZ BIOTECHNOLOGY, INC.

RHBDL1 (5B11): sc-517160

BACKGROUND

Members of the rhomboid family of integral membrane proteins are related to *Drosophila* rhomboid-1, a serine protease that cleaves the membrane domain of the *Drosophila* EGF-family protein, Spitz, to release a soluble growth factor. Rhomboid-related protein 1 (RHBDL1) is a 438 amino acid multi-pass membrane protein belonging to the rhomboid family. As an intramembrane serine protease, RHBDL1 cleaves type-1 transmembrane domains using a catalytic dyad composed of serine and histidine that are contributed by different transmembrane domains. Believed to be expressed in heart, brain, skeletal muscle and kidney, RHBDL1 can exist as two isoforms due to alternative splicing events. RHBDL1 is encoded by a gene mapping to human chromosome 16p13.3.

REFERENCES

1. Urban, S., et al. 2001. *Drosophila* rhomboid-1 defines a family of putative intramembrane serine proteases. Cell 107: 173-182.
2. Urban, S., et al. 2002. A family of rhomboid intramembrane proteases activates all *Drosophila* membrane-tethered EGF ligands. EMBO J. 21: 4277-4286.
3. Urban, S., et al. 2003. Substrate specificity of rhomboid intramembrane proteases is governed by helix-breaking residues in the substrate transmembrane domain. Mol. Cell 11: 1425-1434.
4. Pascall, J.C., et al. 2004. Intramembrane cleavage of ephrinB3 by the human rhomboid family protease, RHBDL2. Biochem. Biophys. Res. Commun. 317: 244-252.
5. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608962. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Urban, S. 2006. Rhomboid proteins: conserved membrane proteases with divergent biological functions. Genes Dev. 20: 3054-3068.

CHROMOSOMAL LOCATION

Genetic locus: RHBDL1 (human) mapping to 16p13.3.

SOURCE

RHBDL1 (5B11) is a mouse monoclonal antibody raised against amino acids 1-100 representing partial length RHBDL1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

RHBDL1 (5B11) is recommended for detection of RHBDL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

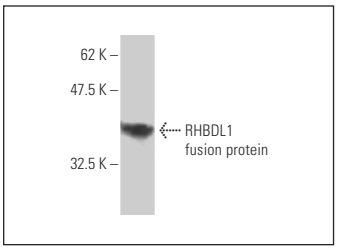
Suitable for use as control antibody for RHBDL1 siRNA (h): sc-93492, RHBDL1 shRNA Plasmid (h): sc-93492-SH and RHBDL1 shRNA (h) Lentiviral Particles: sc-93492-V.

Molecular Weight of RHBDL1: 48 kDa.

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, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



RHBDL1 (5B11): sc-517160. Western blot analysis of human recombinant RHBDL1 fusion protein.

RESEARCH USE

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