

## RHBDL6 (E-12): sc-138583

### 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 veinlet-like protein 6 (RHBDL6) is a 856 amino acid multi-pass endoplasmic reticulum membrane protein belonging to the rhomboid family. As an intramembrane protein, RHBDL6 has no protease activity but regulates the secretion of several ligands of the epidermal growth factor receptor. RHBDL6 may also indirectly activate the epidermal growth factor receptor signaling pathway and may thereby regulate sleep, cell survival, proliferation and migration. RHBDL6 can exist as two isoforms due to alternative splicing events. RHBDL6 is encoded by a gene mapping to human chromosome 17p25.1.

### REFERENCES

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

### CHROMOSOMAL LOCATION

Genetic locus: RHBDL6 (human) mapping to 17q25.1; Rhbdf2 (mouse) mapping to 11 E2.

### SOURCE

RHBDL6 (E-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of RHBDL6 of human origin.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138583 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

RHBDL6 (E-12) is recommended for detection of RHBDL6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with RHBDL1 or RHBDL2.

RHBDL6 (E-12) is also recommended for detection of RHBDL6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RHBDL6 siRNA (h): sc-93694, RHBDL6 siRNA (m): sc-152848, RHBDL6 shRNA Plasmid (h): sc-93694-SH, RHBDL6 shRNA Plasmid (m): sc-152848-SH, RHBDL6 shRNA (h) Lentiviral Particles: sc-93694-V and RHBDL6 shRNA (m) Lentiviral Particles: sc-152848-V.

Molecular Weight of RHBDL6: 96 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.