# SANTA CRUZ BIOTECHNOLOGY, INC.

# LRRTM4 (A-12): sc-133387



# BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic  $\alpha/\beta$  horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRR repeats contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. The LRRTM protein family plays a role in the regulation of various cellular events during nervous system development. Localizing predominantly to the nervous system, LRRTM family members are known to exhibit synaptogenic activity. LRRTM4 (leucine-rich repeat transmembrane neuronal protein 4) is a 590 amino acid member of the LRRTM protein family. Expressed in neuronal tissues, LRRTM4 may play a role in the development and maintenance of the vertebrate nervous system. A single-pass type I membrane protein, LRRTM4 contains 10 LRR repeats. LRRTM4 is expressed as two isoforms produced by alternative splicing.

#### REFERENCES

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- Lauren, J., Airaksinen, M.S., Saarma, M. and Timmusk, T. 2003. A novel gene family encoding leucine-rich repeat transmembrane proteins differentially expressed in the nervous system. Genomics 81: 411-421.
- 3. Haines, B.P. and Rigby, P.W. 2007. Developmentally regulated expression of the LRRTM gene family during mid-gestation mouse embryogenesis. Gene Expr. Patterns 7: 23-29.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610870. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Brose, N. 2009. Synaptogenic proteins and synaptic organizers: "many hands make light work". Neuron 61: 650-652.
- Linhoff, M.W., Lauren, J., Cassidy, R.M., Dobie, F.A., Takahashi, H., Nygaard, H.B., Airaksinen, M.S., Strittmatter, S.M. and Craig, A.M. 2009. An unbiased expression screen for synaptogenic proteins identifies the LRRTM protein family as synaptic organizers. Neuron 61: 734-749.

#### CHROMOSOMAL LOCATION

Genetic locus: LRRTM4 (human) mapping to 2p12; Lrrtm4 (mouse) mapping to 6 C3.

#### SOURCE

LRRTM4 (A-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of LRRTM4 of human origin.

#### **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 100  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-133387 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### **APPLICATIONS**

LRRTM4 (A-12) is recommended for detection of LRRTM4 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 other LRRTM family members.

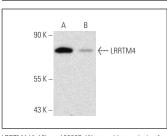
LRRTM4 (A-12) is also recommended for detection of LRRTM4 isoforms 1 and 2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for LRRTM4 siRNA (h): sc-94320, LRRTM4 siRNA (m): sc-149123, LRRTM4 shRNA Plasmid (h): sc-94320-SH, LRRTM4 shRNA Plasmid (m): sc-149123-SH, LRRTM4 shRNA (h) Lentiviral Particles: sc-94320-V and LRRTM4 shRNA (m) Lentiviral Particles: sc-149123-V.

Molecular Weight of LRRTM4: 67 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

#### DATA



LRRTM4 (A-12): sc-133387. Western blot analysis of LRRTM4 expression in HeLa  $({\bf A})$  and Jurkat  $({\bf B})$  whole cell lysates.

#### **RESEARCH USE**

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

#### PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.