

LRRTM2 (S-13): sc-133383

BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic α/β 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. LRRTM2 (leucine rich repeat transmembrane neuronal 2), also known as LRRN2, is a 516 amino acid single-pass type I membrane protein involved in the development maintenance of the vertebrate nervous system. Expressed in kidney and neuronal tissues, LRRTM2 contains ten LRR repeats and belongs to the LRRTM family. LRRTM2 is encoded by a gene that maps to human chromosome 5q31.2.

REFERENCES

1. Ishikawa, K., et al. 1997. Prediction of the coding sequences of unidentified human genes. VIII. 78 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 4: 307-313.
2. Laurén, J., et al. 2003. A novel gene family encoding leucine-rich repeat transmembrane proteins differentially expressed in the nervous system. Genomics 81: 411-421.
3. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610868. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. 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.
5. Brose, N. 2009. Synaptogenic proteins and synaptic organizers: "many hands make light work." Neuron 61: 650-652.
6. Linhoff, M.W., et al. 2009. An unbiased expression screen for synaptogenic proteins identifies the LRRTM protein family as synaptic organizers. Neuron 61: 734-749.

CHROMOSOMAL LOCATION

Genetic locus: LRRTM2 (human) mapping to 5q31.2; Lrrtm2 (mouse) mapping to 18 B1.

SOURCE

LRRTM2 (S-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of LRRTM2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-133383 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRTM2 (S-13) is recommended for detection of LRRTM2 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 other LRRTM family members.

LRRTM2 (S-13) is also recommended for detection of LRRTM2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LRRTM2 siRNA (h): sc-91835, LRRTM2 siRNA (m): sc-149121, LRRTM2 shRNA Plasmid (h): sc-91835-SH, LRRTM2 shRNA Plasmid (m): sc-149121-SH, LRRTM2 shRNA (h) Lentiviral Particles: sc-91835-V and LRRTM2 shRNA (m) Lentiviral Particles: sc-149121-V.

Molecular Weight of LRRTM2: 59 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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ 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.

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.