

LRTM1 (P-17): sc-103022

BACKGROUND

Leucine-rich repeats (LRRs) are 20-30 amino acid motifs that mediate protein-protein interactions. The primary function of these motifs is to provide a versatile structural framework for the formation of these protein-protein interactions. LRRs are present in a variety of proteins with diverse structure and function, including innate immunity and nervous system development. Several human diseases are associated with mutations in the genes encoding LRR-containing proteins. LRTM1 (Leucine-rich repeat and transmembrane domain-containing protein 1) is a 345 amino acid single pass transmembrane protein that contains five LRRs. The gene encoding LRTM1 maps to chromosome 3, which spans 200 million base pairs and encodes between 1,100 and 1,500 genes. There are two isoforms of LRTM1 which are produced as a result of alternative splicing events.

REFERENCES

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4. Matsushima, N., et al. 2005. Structural analysis of leucine-rich-repeat variants in proteins associated with human diseases. *Cell. Mol. Life Sci.* 62: 2771-2791.
5. Chen, Y., et al. 2006. AMIGO and friends: an emerging family of brain-enriched, neuronal growth modulating, type I transmembrane proteins with leucine-rich repeats (LRR) and cell adhesion molecule motifs. *Brain Res. Rev.* 51: 265-274.
6. Kim, H.G., et al. 2007. Candidate loci for Zimmermann-Laband syndrome at 3p14.3. *Am. J. Med. Genet. A* 143: 107-111.
7. Dolan, J., et al. 2007. The extracellular leucine-rich repeat superfamily; a comparative survey and analysis of evolutionary relationships and expression patterns. *BMC Genomics* 8: 320.
8. Ko, J. and Kim, E. 2007. Leucine-rich repeat proteins of synapses. *J. Neurosci. Res.* 85: 2824-2832.
9. Muto, Y., et al. 2008. An evolutionarily conserved leucine-rich repeat protein CLERC is a centrosomal protein required for spindle pole integrity. *Cell Cycle* 7: 2738-2748.

CHROMOSOMAL LOCATION

Genetic locus: LRTM1 (human) mapping to 3p14.3.

SOURCE

LRTM1 (P-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of LRTM1 of human origin.

RESEARCH USE

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

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-103022 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRTM1 (P-17) is recommended for detection of LRTM1 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member LRTM2.

Suitable for use as control antibody for LRTM1 siRNA (h): sc-78505, LRTM1 shRNA Plasmid (h): sc-78505-SH and LRTM1 shRNA (h) Lentiviral Particles: sc-78505-V.

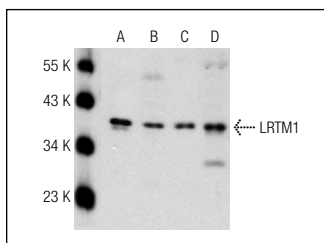
Molecular Weight of LRTM1: 38 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A-431 whole cell lysate: sc-2201 or HEL 92.1.7 cell lysate: sc-2270.

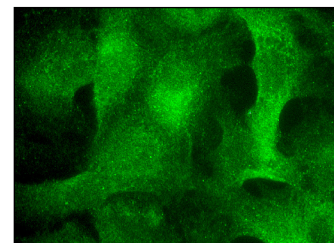
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



LRTM1 (P-17): sc-103022. Western blot analysis of LRTM1 expression in K-562 (A), Hep G2 (B), A-431 (C) and HEL 92.1.7 (D) whole cell lysates.



LRTM1 (P-17): sc-103022. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

STORAGE

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