



LRRIQ1 (D-20): sc-247898

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. LRRIQ1 (leucine-rich repeat and IQ domain-containing protein 1) is a 1,336 amino acid protein that contains 12 LRRs and one IQ domain, which has been characterized to facilitate the binding of calmodulin (CaM I). There are three isoforms of LRRIQ1 which are produced as a result of alternative splicing events.

REFERENCES

1. Kobe, B. and Deisenhofer, J. 1994. The leucine-rich repeat: a versatile binding motif. *Trends Biochem. Sci.* 19: 415-421.
2. Kobe, B. and Deisenhofer, J. 1995. Proteins with leucine-rich repeats. *Curr. Opin. Struct. Biol.* 5: 409-416.
3. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
4. Matsushima, N., Tachi, N., Kuroki, Y., Enkhbayar, P., Osaki, M., Kamiya, M. and Kretsinger, R.H. 2005. Structural analysis of leucine-rich-repeat variants in proteins associated with human diseases. *Cell. Mol. Life Sci.* 62: 2771-2791.
5. Chen, Y., Aulia, S., Li, L. and Tang, B.L. 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. Dolan, J., Walshe, K., Alsbury, S., Hokamp, K., O'Keeffe, S., Okafuji, T., Miller, S.F., Tear, G. and Mitchell, K.J. 2007. The extracellular leucine-rich repeat superfamily; a comparative survey and analysis of evolutionary relationships and expression patterns. *BMC Genomics* 8: 320.
7. Muto, Y., Yoshioka, T., Kimura, M., Matsunami, M., Saya, H. and Okano, Y. 2008. An evolutionarily conserved leucine-rich repeat protein CLERC is a centrosomal protein required for spindle pole integrity. *Cell Cycle* 7: 2738-2748.
8. Bella, J., Hindle, K.L., McEwan, P.A. and Lovell, S.C. 2008. The leucine-rich repeat structure. *Cell. Mol. Life Sci.* 65: 2307-2333.
9. Ohrtman, J., Ritter, B., Polster, A., Beam, K.G. and Papadopoulos, S. 2008. Sequence differences in the IQ motifs of CaV1.1 and CaV1.2 strongly impact calmodulin binding and calcium-dependent inactivation. *J. Biol. Chem.* 283: 29301-29311.

CHROMOSOMAL LOCATION

Genetic locus: LRRIQ1 (human) mapping to 12q21.31.

SOURCE

LRRIQ1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LRRIQ1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-247898 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRIQ1 (D-20) is recommended for detection of LRRIQ1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for LRRIQ1 siRNA (h): sc-96166, LRRIQ1 shRNA Plasmid (h): sc-96166-SH and LRRIQ1 shRNA (h) Lentiviral Particles: sc-96166-V.

Molecular Weight of LRRIQ1: 155 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.