

LRRC3 (K-12): sc-83722

BACKGROUND

Leucine-rich repeats (LRRs) are 20-29 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 genes encoding LRR-containing proteins. The leucine-rich repeat-containing protein 3 (LRRC3 or LRRC3A) is a 257 amino acid protein that contains 3 LRR repeats. The gene encoding LRRC3 maps to chromosome 21, the smallest of the human chromosomes. Chromosome 21 contains nearly 300 genes and 47 million base pairs. Down syndrome, also known as trisomy 21, is the disease most commonly associated with chromosome 21. Translocations are found to occur between chromosome 21 and 8, and chromosome 21 and 12, in certain leukemias.

REFERENCES

1. Tyson, J., et al. 1997. IsK and KvLQT1: mutation in either of the two subunits of the slow component of the delayed rectifier potassium channel can cause Jervell and Lange-Nielsen syndrome. *Hum. Mol. Genet.* 6: 2179-2185.
2. Kobe, B., et al. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
3. 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.
4. 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.
5. Robakis, N.K. 2006. The discovery and mapping to chromosome 21 of the Alzheimer's amyloid gene: history revised. *J. Alzheimers Dis.* 10: 453-455.
6. Ait Yahya-Graison, E., et al. 2007. Classification of human chromosome 21 gene-expression variations in Down syndrome: impact on disease phenotypes. *Am. J. Hum. Genet.* 81: 475-491.
7. Peterson, L.F., et al. 2007. Acute myeloid leukemia with the 8q22;21q22 translocation: secondary mutational events and alternative t(8;21) transcripts. *Blood* 110: 799-805.
8. 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.
9. Ko, J., et al. 2007. Leucine-rich repeat proteins of synapses. *J. Neurosci. Res.* 85: 2824-2832.

CHROMOSOMAL LOCATION

Genetic locus: LRRC3 (human) mapping to 21q22.3; Lrrc3 (mouse) mapping to 10 C1.

SOURCE

LRRC3 (K-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of LRRC3 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-83722 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRC3 (K-12) is recommended for detection of LRRC3 of mouse, rat and 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 other LRRC family members.

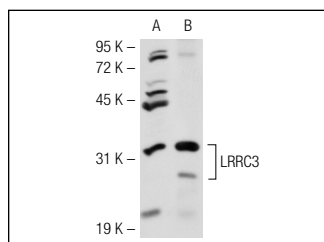
LRRC3 (K-12) is also recommended for detection of LRRC3 in additional species, including canine and bovine.

Suitable for use as control antibody for LRRC3 siRNA (m): sc-149069, LRRC3 siRNA (h): sc-91503, LRRC3 shRNA Plasmid (m): sc-149069-SH, LRRC3 shRNA Plasmid (h): sc-91503-SH, LRRC3 shRNA (m) Lentiviral Particles: sc-149069-V and LRRC3 shRNA (h) Lentiviral Particles: sc-91503-V.

Molecular Weight of LRRC3: 28 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136 or mouse brain extract: sc-2253.

DATA



LRRC3 (K-12): sc-83722. Western blot analysis of LRRC3 expression in HEK293 whole cell lysate (A) and mouse brain tissue extract (B).

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.