SANTA CRUZ BIOTECHNOLOGY, INC.

LRCH4 (S-17): sc-51424

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BACKGROUND

Members of the leucine-rich repeat family include LRCH1, LRCH2, LRCH3 and LRCH4. All family members contain one calponin-homology domain and nine leucine-rich repeats. LRCH4 (leucine-rich repeats and calponin homology (CH) domain containing 4), also known as LRN, LRRN1, LRRN4 or SAP25, is a 683 amino acid protein that belongs to the leucine-rich repeat family. The carboxy-terminus of LRCH4 may act as a membrane anchor between cells, while the amino-terminus contains the leucine-rich domains is thought to be involved in ligand binding. The calponin homology (CH) domain is suggested to confer actin binding to a variety of cytoskeletal and signaling molecules. The gene encoding LRCH4 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome.

REFERENCES

1. Taguchi, A., et al. 1996. Molecular cloning of novel leucine-rich repeat proteins and their expression in the developing mouse nervous system. Brain Res. Mol. Brain Res. 35: 31-40.

2. Bañuelos, S., et al. 1998. Structural comparisons of calponin homology domains: implications for actin binding. Structure 6: 1419-1431.

3. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. Proc. Natl. Acad. Sci. USA 95: 3781-3785.

4. Gimona, M., et al. 2002. Functional plasticity of CH domains. FEBS Lett. 513: 98-106.

5. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. Nature 424: 157-164.

6. Spector, T.D., et al. 2006. Association between a variation in LRCH1 and knee osteoarthritis: a genome-wide single-nucleotide polymorphism association study using DNA pooling. Arthritis Rheum. 54: 524-532.

7. Sjöblom, B., et al. 2008. Novel structural insights into F-Actin-binding and novel functions of calponin homology domains. Curr. Opin. Struct. Biol. 18: 702-708.

8. Jiang, Q., et al. 2008. Lack of association of single nucleotide polymorphism in LRCH1 with knee osteoarthritis susceptibility. J. Hum. Genet. 53: 42-47.

9. SWISS-PROT/TrMBL (O75427). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: LRCH4 (human) mapping to 7q22.1; Lrch4 (mouse) mapping to 5 G2.

SOURCE

LRCH4 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LRCH4 of human origin.

STORAGE

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

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-51424 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRCH4 (S-17) is recommended for detection of LRCH4 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).

LRCH4 (S-17) is also recommended for detection of LRCH4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LRCH4 siRNA (h): sc-72376, LRCH4 siRNA (m): sc-72377, LRCH4 shRNA Plasmid (h): sc-72376-SH, LRCH4 shRNA Plasmid (m): sc-72377-SH, LRCH4 shRNA (h) Lentiviral Particles: sc-72376-V and LRCH4 shRNA (m) Lentiviral Particles: sc-72377-V.

Molecular Weight (predicted) of LRCH4: 73 kDa.

Molecular Weight (observed) of LRCH4: 83 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, SH-SY5Y cell lysate: sc-3812 or LRCH4 (m): 293T Lysate: sc-121392.

DATA
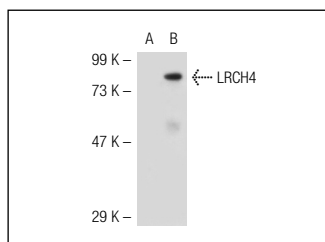
LRCH4 (S-17): sc-51424. Western blot analysis of LRCH4 expression in non-transfected: sc-117752 (**A**) and mouse LRCH4 transfected: sc-121392 (**B**) 293T whole cell lysates.

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.