

LRCH4 (D-9): sc-166010

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.

CHROMOSOMAL LOCATION

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

SOURCE

LRCH4 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 268-305 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166010 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

LRCH4 (D-9) is recommended for detection of LRCH4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

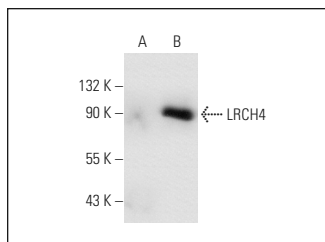
Molecular Weight (observed) of LRCH4: 83 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, IMR-32 cell lysate: sc-2409 or LRCH4 (h): 293 Lysate: sc-113267.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



LRCH4 (D-9): sc-166010. Western blot analysis of LRCH4 expression in non-transfected: sc-110760 (A) and human LRCH4 transfected: sc-113267 (B) 293 whole cell lysates.

RESEARCH USE

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