

# LRCH4 (E-17): sc-51422

## 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/TrEMBL (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 (E-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-51422 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

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

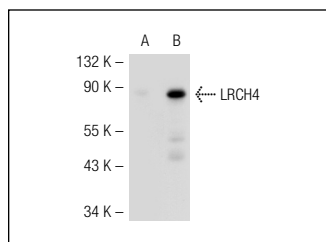
Suitable for use as control antibody for LRCH4 siRNA (h): sc-72376, LRCH4 siRNA (m): sc-72377, LRCH4 shRNA Plasmid (h): sc-72376-SH, LRCH4 shRNA Plasmid (m): sc-72377-SH, LRCH4 shRNA (h) Lentiviral Particles: sc-72376-V and LRCH4 shRNA (m) Lentiviral Particles: sc-72377-V.

Molecular Weight (predicted) of LRCH4: 73 kDa.

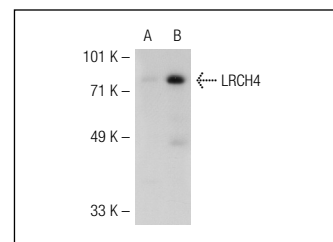
Molecular Weight (observed) of LRCH4: 83 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, LRCH4 (h): 293 Lysate: sc-113267 or LRCH4 (m): 293T Lysate: sc-121392.

## DATA



LRCH4 (E-17): sc-51422. Western blot analysis of LRCH4 expression in non-transfected: sc-117752 (A) and mouse LRCH4 transfected: sc-121392 (B) 293T whole cell lysates.



LRCH4 (E-17): sc-51422. 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.