

LRRC50 (D-14): sc-164917

BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic α/β horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRR repeats contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. LRRC50 (leucine rich repeat containing 50) is a 725 amino acid protein that localizes to the cellular projection, as well as to the spindle and the cytoplasm, and contains six LRR repeats. Existing as multiple alternatively spliced isoforms, LRRC50 functions as a cilium-specific protein that is required for the maintenance of ciliary architecture and is also involved in the regulation of both Actin-based brush border and microtubule-based cilia microvilli. Due to its association with microvilli, LRRC50 may be involved in the pathogenesis of polycystic kidney disease.

REFERENCES

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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. Kedzierski, Ł, et al. 2004. Leucine-rich repeats in host-pathogen interactions. *Arch. Immunol. Ther. Exp.* 52: 104-112.
5. Enkhbayar, P., et al. 2004. Structural principles of leucine-rich repeat (LRR) proteins. *Proteins* 54: 394-403.
6. 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.
7. van Rooijen, E., et al. 2008. LRRC50, a conserved ciliary protein implicated in polycystic kidney disease. *J. Am. Soc. Nephrol.* 19: 1128-1138.

CHROMOSOMAL LOCATION

Genetic locus: DNAAF1 (human) mapping to 16q23.3; *Lrrc50* (mouse) mapping to 8 E1.

SOURCE

LRRC50 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LRRC50 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-164917 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

LRRC50 (D-14) is recommended for detection of LRRC50 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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.

Suitable for use as control antibody for LRRC50 siRNA (h): sc-93420, LRRC50 siRNA (m): sc-149090, LRRC50 shRNA Plasmid (h): sc-93420-SH, LRRC50 shRNA Plasmid (m): sc-149090-SH, LRRC50 shRNA (h) Lentiviral Particles: sc-93420-V and LRRC50 shRNA (m) Lentiviral Particles: sc-149090-V.

Molecular Weight (predicted) of LRRC50: 80 kDa.

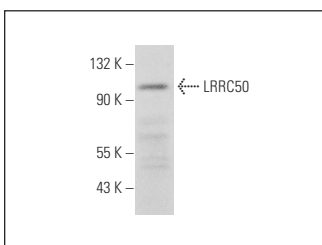
Molecular Weight (observed) of LRRC50: 90 kDa.

Positive Controls: U-698-M whole cell lysate: sc-364799.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



LRRC50 (D-14): sc-164917. Western blot analysis of LRRC50 expression in U-698-M whole cell lysate.

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.