

# LRRC50 (X-22): sc-133762

## BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic  $\alpha/\beta$  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 6 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 (X-22) is an affinity purified rabbit polyclonal antibody raised against synthetic LRRC50 peptide of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG in 500  $\mu$ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## 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.

## APPLICATIONS

LRRC50 (X-22) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

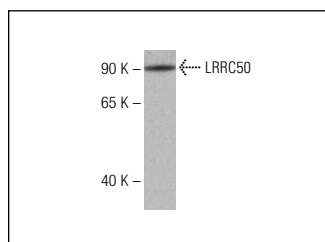
Molecular Weight (observed) of LRRC50: 90 kDa.

Positive Controls: 721 B whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

## DATA



LRRC50 (X-22): sc-133762. Western blot analysis of LRRC50 expression in 721 B whole cell lysate.

## PROTOCOLS

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