

# LRRC21 (F-10): sc-376508

## BACKGROUND

The leucine-rich repeat (LRR) 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 LRRs contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. The primary function of these motifs is to provide a versatile structural framework to mediate the formation of protein-protein interactions. LRRs are present in a variety of proteins with diverse structure and function, including innate immunity and nervous system development. Several human diseases are associated with mutations in genes encoding LRR-containing proteins. The leucine-rich repeat-containing protein 21 (LRRC21), also designated leucine-rich repeat, immunoglobulin-like domain and transmembrane domain-containing protein 1 (LRIT1) or PAL, is a 623 amino acid protein that contains six LRRs. LRRC21 is expressed in retina and may play a role in phototransduction.

## REFERENCES

- Gomi, F., et al. 2000. Molecular cloning of a novel membrane glycoprotein, pal, specifically expressed in photoreceptor cells of the retina and containing leucine-rich repeat. *J. Neurosci.* 20: 3206-3213.
- Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
- Hofman, P., et al. 2001. Lack of blood-brain barrier properties in microvessels of the prelaminar optic nerve head. *Invest. Ophthalmol. Vis. Sci.* 42: 895-901.

## CHROMOSOMAL LOCATION

Genetic locus: LRIT1 (human) mapping to 10q23.1; Lrit1 (mouse) mapping to 14 B.

## SOURCE

LRRC21 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 583-613 within a C-terminal cytoplasmic domain of LRRC21 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LRRC21 (F-10) is available conjugated to agarose (sc-376508 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376508 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376508 PE), fluorescein (sc-376508 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376508 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376508 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376508 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376508 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376508 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376508 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376508 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

LRRC21 (F-10) is recommended for detection of LRRC21 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for LRRC21 siRNA (h): sc-90692, LRRC21 siRNA (m): sc-106185, LRRC21 shRNA Plasmid (h): sc-90692-SH, LRRC21 shRNA Plasmid (m): sc-106185-SH, LRRC21 shRNA (h) Lentiviral Particles: sc-90692-V and LRRC21 shRNA (m) Lentiviral Particles: sc-106185-V.

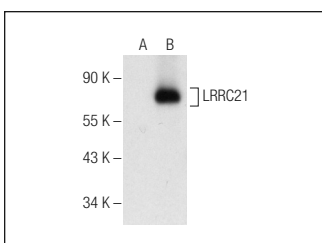
Molecular Weight of LRRC21: 68 kDa.

Positive Controls: LRRC21 (m): 293T Lysate: sc-121405.

## RECOMMENDED SUPPORT REAGENTS

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

## DATA



LRRC21 (F-10): sc-376508. Western blot analysis of LRRC21 expression in non-transfected: sc-117752 (A) and mouse LRRC21 transfected: sc-121405 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Campla, C.K., et al. 2022. Frmpd1 facilitates trafficking of G-protein transducin and modulates synaptic function in rod photoreceptors of mammalian retina. *eNeuro* 9: ENEURO.0348-22.2022.

## 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.