

LRFN4 (F-3): sc-393425

BACKGROUND

LRFN4 (leucine rich repeat and fibronectin type III domain containing 4), also known as SALM3 or FIGLER6, is a 635 amino acid single-pass type I membrane protein that belongs to the LRFN family. Containing a fibronectin type-III domain, an Ig-like (immunoglobulin-like) domain, a LRRCT domain, a LRRNT domain and seven LRR (leucine-rich repeats), LRFN4 is thought to promote neurite outgrowth in hippocampal neurons and may play a role in redistributing PSD-95 to the cell periphery. LRFN4 forms heteromeric complexes with LRFN1, LRFN2, LRFN3 and LRFN5, but does not have the ability to form homomeric complexes across cell junctions of adjacent cells like some other LRFN family members. The PDZ-binding motif of LRFN4 is required for neurite outgrowth promotion and for SAP 97-, NE-dlg- and PSD-95-binding. LRFN4 is encoded by a gene located on human chromosome 11q13.2 and mouse chromosome 19 A.

REFERENCES

1. Morimura, N., et al. 2006. Comparative analysis of structure, expression and PSD95-binding capacity of LRFN, a novel family of neuronal transmembrane proteins. *Gene* 380: 72-83.
2. Wang, C.Y., et al. 2006. A novel family of adhesion-like molecules that interacts with the NMDA receptor. *J. Neurosci.* 26: 2174-2183.
3. Ko, J., et al. 2006. SALM synaptic cell adhesion-like molecules regulate the differentiation of excitatory synapses. *Neuron* 50: 233-245.
4. Castellanos, A., et al. 2007. Regulation of erythropoiesis by the neuronal transmembrane protein LRFN2. *Exp. Hematol.* 35: 724-734.
5. Ko, J. and Kim, E. 2007. Leucine-rich repeat proteins of synapses. *J. Neurosci. Res.* 85: 2824-2832.
6. Seabold, G.K., et al. 2008. The SALM family of adhesion-like molecules forms heteromeric and homomeric complexes. *J. Biol. Chem.* 283: 8395-8405.
7. Wang, P.Y., et al. 2008. Synaptic adhesion-like molecules (SALMs) promote neurite outgrowth. *Mol. Cell. Neurosci.* 39: 83-94.
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CHROMOSOMAL LOCATION

Genetic locus: LRFN4 (human) mapping to 11q13.2; Lrfn4 (mouse) mapping to 19 A.

SOURCE

LRFN4 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 209-232 within an extracellular domain of LRFN4 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 IgG₃ 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-393425 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

LRFN4 (F-3) is recommended for detection of LRFN4 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 LRFN4 siRNA (h): sc-96803, LRFN4 siRNA (m): sc-149036, LRFN4 shRNA Plasmid (h): sc-96803-SH, LRFN4 shRNA Plasmid (m): sc-149036-SH, LRFN4 shRNA (h) Lentiviral Particles: sc-96803-V and LRFN4 shRNA (m) Lentiviral Particles: sc-149036-V.

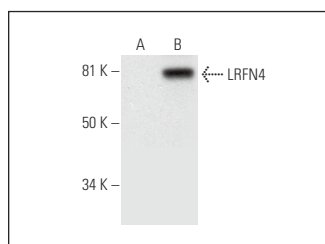
Molecular Weight of LRFN4: 67 kDa.

Positive Controls: LRFN4 (m): 293T Lysate: sc-121393.

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



LRFN4 (F-3): sc-393425. Western blot analysis of LRFN4 expression in non-transfected: sc-117752 (A) and mouse LRFN4 transfected: sc-121393 (B) 293T whole cell lysates.

RESEARCH USE

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