

FRMPD4 (G-19): sc-242862

BACKGROUND

FERM domains are roughly 150 amino acids in length and are found in a number of cytoskeletal-associated proteins such as Ezrin, Radixin, Moesin and 4.1 (erythrocyte membrane protein band 4.1), where they provide a link between cytoskeletal signals and membrane dynamics. FRMPD4 (FERM and PDZ domain-containing protein 4), also known as PDZD10 (PDZ domain-containing protein 10), PSD-95-interacting regulator of spine morphogenesis or KIAA0316, is a 1,322 amino acid protein containing one FERM domain, a PDZ (DHR) domain, and a WW domain. Localizing to cell projection and dendritic spine, FRMPD4 acts as a positive regulator of dendritic spine morphogenesis and density, and is required for excitatory synaptic transmission maintenance. The gene encoding FRMPD4 maps to human chromosome Xp22.2.

REFERENCES

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2. An, N., et al. 2008. The PDZ and band 4.1 containing protein Frmpd1 regulates the subcellular location of activator of G-protein signaling 3 and its interaction with G-proteins. *J. Biol. Chem.* 283: 24718-24728.
3. Lee, H.W., et al. 2008. Preso, a novel PSD-95-interacting FERM and PDZ domain protein that regulates dendritic spine morphogenesis. *J. Neurosci.* 28: 14546-14556.
4. Tepass, U. 2009. FERM proteins in animal morphogenesis. *Curr. Opin. Genet. Dev.* 19: 357-367.
5. Bailey, S.D., et al. 2010. Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) study. *Diabetes Care.* 33: 2250-2253.
6. Honda, S., et al. 2010. Copy-number variations on the X chromosome in Japanese patients with mental retardation detected by array-based comparative genomic hybridization analysis. *J. Hum. Genet.* 55: 590-599.
7. Piton, A., et al. 2010. Systematic resequencing of X-chromosome synaptic genes in autism spectrum disorder and schizophrenia. *Mol. Psychiatry* 16: 867-880

CHROMOSOMAL LOCATION

Genetic locus: FRMPD4 (human) mapping to Xp22.2; Frmpd4 (mouse) mapping to X F5.

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.

SOURCE

FRMPD4 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FRMPD4 of human origin.

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-242862 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FRMPD4 (G-19) is recommended for detection of FRMPD4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 FRMPD1, FRMPD2 or FRMPD3.

FRMPD4 (G-19) is also recommended for detection of FRMPD4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FRMPD4 siRNA (h): sc-90889, FRMPD4 siRNA (m): sc-145248, FRMPD4 shRNA Plasmid (h): sc-90889-SH, FRMPD4 shRNA Plasmid (m): sc-145248-SH, FRMPD4 shRNA (h) Lentiviral Particles: sc-90889-V and FRMPD4 shRNA (m) Lentiviral Particles: sc-145248-V.

Molecular Weight of FRMPD4: 144 kDa.

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) 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.