

LGI3 (L-15): sc-74727

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. Leucine-rich glioma-inactivated protein 3 (LGI3), also known as LGI1-like protein 4 (LGL4) or leucine-rich repeat LGI family member 3, is a 548 amino acid secretory protein. LGI3 contains five LRR repeats and seven EAR repeats. Widely expressed, with highest levels in brain and lung, LGI3 has been shown to colocalize with endocytosis-associated proteins, lipid raft markers, and Syntaxin. The gene encoding LGI3 maps to chromosome 8p21.3.

REFERENCES

- Gu, W., Wevers, A., Schröder, H., Grzeschik, K.H., Derst, C., Brodtkorb, E., de Vos, R. and Steinlein, O.K. 2002. The LGI1 gene involved in lateral temporal lobe epilepsy belongs to a new subfamily of leucine-rich repeat proteins. *FEBS Lett.* 519: 71-76.
- Gu, W., Sander, T., Becker, T. and Steinlein, O.K. 2004. Genotypic association of exonic LGI4 polymorphisms and childhood absence epilepsy. *Neurogenetics* 5: 41-44.
- Berkovic, S.F., Izzillo, P., McMahon, J.M., Harkin, L.A., McIntosh, A.M., Phillips, H.A., Briellmann, R.S., Wallace, R.H., Mazarib, A., Neufeld, M.Y., Korczyk, A.D., Scheffer, I.E. and Mulley, J.C. 2004. LGI1 mutations in temporal lobe epilepsies. *Neurology* 62: 1115-1119.
- Senecchal, K.R., Thaller, C. and Noebels, J.L. 2005. ADPEAF mutations reduce levels of secreted LGI1, a putative tumor suppressor protein linked to epilepsy. *Hum. Mol. Genet.* 14: 1613-1620.
- Lee, S.E., Lee, A.Y., Park, W.J., Jun, D.H., Kwon, N.S., Baek, K.J., Kim, Y.G. and Yun, H.Y. 2006. Mouse LGI3 gene: expression in brain and promoter analysis. *Gene* 372: 8-17.
- Kimura, N., Ishii, Y., Suzuki, S., Negishi, T., Kyuwa, S. and Yoshikawa, Y. 2007. A β upregulates and colocalizes with LGI3 in cultured rat astrocytes. *Cell. Mol. Neurobiol.* 27: 335-350.
- Okabayashi, S. and Kimura, N. 2007. Immunohistochemical and biochemical analyses of LGI3 in monkey brain: LGI3 accumulates in aged monkey brains. *Cell. Mol. Neurobiol.* 27: 819-830.
- Okabayashi, S. and Kimura, N. 2008. Leucine-rich glioma inactivated 3 is involved in amyloid β peptide uptake by astrocytes and endocytosis itself. *Neuroreport* 19: 1175-1179.
- Park, W.J., Lee, S.E., Kwon, N.S., Baek, K.J., Kim, D.S. and Yun, H.Y. 2008. Leucine-rich glioma inactivated 3 associates with syntaxin 1. *Neurosci. Lett.* 444: 240-244.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: LGI3 (human) mapping to 8p21.3; Lgi3 (mouse) mapping to 14 D2.

SOURCE

LGI3 (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LGI3 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-74727 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LGI3 (L-15) is recommended for detection of LGI3 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).

LGI3 (L-15) is also recommended for detection of LGI3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for LGI3 siRNA (h): sc-75420, LGI3 siRNA (m): sc-75421, LGI3 shRNA Plasmid (h): sc-75420-SH, LGI3 shRNA Plasmid (m): sc-75421-SH, LGI3 shRNA (h) Lentiviral Particles: sc-75420-V and LGI3 shRNA (m) Lentiviral Particles: sc-75421-V.

Molecular Weight of LGI3: 62 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.

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.