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LGI1 Antibody

Catalog # ASC10663

Product Information

Application	WB, E
Primary Accession	O95970
Other Accession	AAQ89244, 37182888
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	63818
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LGI1 antibody can be used for the detection of LGI1 by Western blot at 1 g/mL.

Additional Information

Gene ID	9211
Other Names	Leucine-rich glioma-inactivated protein 1, Epitempin-1, LGI1, EPT
Target/Specificity	LGI1;
Reconstitution & Storage	LGI1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LGI1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LGI1 {ECO:0000303|PubMed:9879993, ECO:0000312|HGNC:HGNC:6572}
Function	Regulates voltage-gated potassium channels assembled from KCNA1, KCNA4 and KCNAB1. It slows down channel inactivation by precluding channel closure mediated by the KCNAB1 subunit. Ligand for ADAM22 that positively regulates synaptic transmission mediated by AMPA-type glutamate receptors (By similarity). Plays a role in suppressing the production of MMP1/3 through the phosphatidylinositol 3-kinase/ERK pathway (PubMed:15047712).
Cellular Location	Secreted. Synapse {ECO:0000250|UniProtKB:Q8K4Y5} Cytoplasm {ECO:0000250|UniProtKB:Q9JIA1} [Isoform 2]: Endoplasmic reticulum. Cytoplasm {ECO:0000250|UniProtKB:Q9JIA1}

Tissue Location	[Isoform 1]: Expressed in the occipital cortex and hippocampus; higher amounts are observed in the parietal and frontal cortices, putamen, and, particularly, in the temporal neocortex, where it is between 3 and 5 times more abundant than in the hippocampus (at protein level) (PubMed:16787412). Expression is absent in the cerebellum (PubMed:16787412).

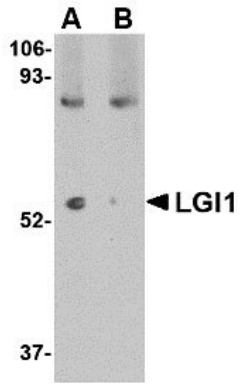
Background

LGI1 Antibody: The leucine-rich, glioma inactivated gene 1 (LGI1) was first identified as a candidate tumor suppressor gene for glioma and may play a role in other cancers. LGI1 is a member of a family of highly related proteins containing leucine-rich repeats (LRRs) which are highly similar to other transmembrane signaling molecules and receptors. LGI1 serves as a ligand to ADAM22, a metalloprotease localized at the synapse. Mutations in LGI1 account for nearly half of autodominant lateral temporal epilepsy (ADTLE), an epileptic syndrome characterized by focal seizures with predominant auditory symptoms. Two isoforms of LGI1 are known to exist, but the top band seen in the western blot is likely to be non-specific. This LGI1 antibody is predicted to be specific to LGI1 and not recognize other LGI proteins.

References

Chernova OB, Somerville RP and Cowell JK. A novel gene, LGI1, from 10q24 is rearranged and downregulated in malignant brain tumors. Oncogene1998; 17:2873-81.
Fialka F, Gruber RM, Hitt R, et al. CPA6, FMO2, LGI1, SIAT1 and TNC are differentially expressed in early- and late-stage oral squamous cell carcinoma - A pilot study. Oral Oncol.2008;
Gu W, Gibert Y, Wirth T, et al. Using gene-history and expression analysis to assess the involvement of LGI genes in human disorders. Mol. Biol. Evol.2005; 22:2209-16.
Fukata Y, Adesnik H, Iwanaga T, et al. Epilepsy-related ligand/receptor complex LGI1 and ADAM22 regulate synaptic transmission. Science2006; 313:1792-5.

Images



Western blot analysis of LGI1 in mouse brain tissue lysate with LGI1 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.