

# LG11 (N-18): sc-9581

## BACKGROUND

As human tumors progress to advanced stages, one genetic alteration that occurs at high frequency is a loss of heterozygosity (LOH) at chromosome 10. Mapping of homozygous deletions on this chromosome led to the isolation of the PTEN (also designated MMAC1 and TEP1), DMBT1 (for deleted in malignant brain tumors 1) and LGI1 (for leucine-rich gene-glioma inactivated 1) candidate tumor suppressor genes. The PTEN gene exhibits a high frequency of mutations in human glioblastomas and is also mutated in other cancers, including sporadic brain, breast, kidney and prostate cancers. Reduced levels of DMBT1 mRNA have been noted in gastrointestinal and esophageal cancers as well as in gliomas. LGI1, which is highly specific for neural tissues, shares homology with several transmembrane and extracellular proteins that function as receptors and adhesion proteins.

## REFERENCES

1. Bigner, S.H., et al. 1988. Specific chromosomal abnormalities in malignant human gliomas. *Cancer Res.* 48: 405-411.
2. James, C.D., et al. 1988. Clonal genomic alterations in glioma malignancy stages. *Cancer Res.* 48: 5546-5551.
3. Steck, P.A., et al. 1997. Identification of a candidate tumour suppressor gene, MMAC1, at chromosome 10q23.3 that is mutated in multiple advanced cancers. *Nat. Genet.* 15: 356-362.
4. Li, J., et al. 1997. PTEN, a putative protein tyrosine phosphatase gene mutated in human brain, breast, and prostate cancer. *Science* 275: 1943-1947.
5. Somerville, R.P., et al. 1998. Molecular analysis of two putative tumour suppressor genes, PTEN and DMBT, which have been implicated in glioblastoma multiforme disease progression. *Oncogene* 17: 1755-1757.
6. Chernova, O.B., et al. 1998. A novel gene, LGI1, from 10q24 is rearranged and downregulated in malignant brain tumors. *Oncogene* 17: 2873-2881.
7. Mori, M., et al. 1999. Lack of DMBT1 expression in oesophageal, gastric and colon cancers. *Br. J. Cancer* 79: 211-213.
8. Fukata, Y. et al. 2006. Epilepsy-related ligand/receptor complex LGI1 and ADAM22 regulate synaptic transmission. *Science* 313: 1792-1795.

## CHROMOSOMAL LOCATION

Genetic locus: LGI1 (human) mapping to 10q23.33; Lgi1 (mouse) mapping to 19 C3.

## SOURCE

LGI1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LGI1 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-9581 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

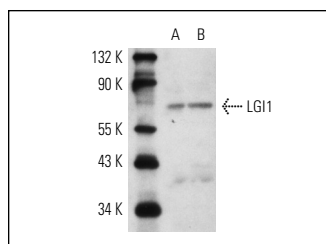
LGI1 (N-18) is recommended for detection of LGI1 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LGI1 (N-18) is also recommended for detection of LGI1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for LGI1 siRNA (h): sc-35806, LGI1 siRNA (m): sc-35807, LGI1 shRNA Plasmid (h): sc-35806-SH, LGI1 shRNA Plasmid (m): sc-35807-SH, LGI1 shRNA (h) Lentiviral Particles: sc-35806-V and LGI1 shRNA (m) Lentiviral Particles: sc-35807-V.

Molecular Weight of LGI1: 60 kDa.

## DATA



LGI1 (N-18): sc-9581. Western blot analysis of LGI1 expression in rat (A) and mouse (B) brain extracts.

## SELECT PRODUCT CITATIONS

1. Gu, W., et al. 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.
2. Furlan, S., et al. 2006. The LGI1/epitempin gene encodes two protein isoforms differentially expressed in human brain. *J. Neurochem.* 98: 985-991.
3. Gabellini, N., et al. 2006. Increased expression of LGI1 gene triggers growth inhibition and apoptosis of neuroblastoma cells. *J. Cell. Physiol.* 207: 711-721.
4. Head, K., et al. 2007. Defining the expression pattern of the LGI1 gene in BAC transgenic mice. *Mamm. Genome* 18: 328-337.

## 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.