SANTA CRUZ BIOTECHNOLOGY, INC.

LGI2 siRNA (m): sc-75419

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. LGI2 (leucine-rich repeat LGI family, member 2), also known as KIAA1916 or LGIL2, is a 545 amino acid secreted protein that contains four LRRs and seven EAR repeats. Expressed in heart, brain and placenta, LGI2 shares high sequence similarity with other LGI family members and is thought to play a role in the pathogenesis of epileptic disorders.

REFERENCES

1. Kobe, B. and Deisenhofer, J. 1994. The leucine-rich repeat: a versatile binding motif. Trends Biochem. Sci. 19: 415-421.
2. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. Curr. Opin. Struct. Biol. 11: 725-732.
3. 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.
4. Scheel, H., et al. 2002. A common protein interaction domain links two recently identified epilepsy genes. Hum. Mol. Genet. 11: 1757-1762.
5. Staub, E., et al. 2002. The novel EPTP repeat defines a superfamily of proteins implicated in epileptic disorders. Trends Biochem. Sci. 27: 441-444.
6. Senechal, K.R., et al. 2005. ADPEAF mutations reduce levels of secreted LGI1, a putative tumor suppressor protein linked to epilepsy. Hum. Mol. Genet. 14: 1613-1620.
7. Gu, W., et al. 2005. Using gene-history and expression analyses to assess the involvement of LGI genes in human disorders. Mol. Biol. Evol. 22: 2209-2216.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 608301. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Lgi2 (mouse) mapping to 5 C1.

PRODUCT

LGI2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LGI2 shRNA Plasmid (m): sc-75419-SH and LGI2 shRNA (m) Lentiviral Particles: sc-75419-V as alternate gene silencing products.

For independent verification of LGI2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75419A, sc-75419B and sc-75419C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

LGI2 siRNA (m) is recommended for the inhibition of LGI2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LGI2 gene expression knockdown using RT-PCR Primer: LGI2 (m)-PR: sc-75419-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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