SANTA CRUZ BIOTECHNOLOGY, INC.

LMO6 siRNA (m): sc-75432

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The Power to Question

BACKGROUND

The LIM-only (LMO) proteins are nuclear factors characterized by a conserved LIM domain. The LIM domain contains a cysteine-rich zinc-binding motif, present in a variety of transcription factors, including the LIM homeobox (LHX) proteins expressed in the central nervous system. The LIM domain only protein 6 (LMO6), also designated Prickle-like protein 3 (Prickle3), is a 615 amino acid protein that contains three LIM zinc-binding domains and one PET domain. LMO6 is widely expressed and belongs to the Prickle/Espinas/Testin Family, which also includes Prickle1 and Prickle2. Defects in Prickle1 are the cause of progressive myoclonic epilepsy type 1B (EPM1B), an autosomal recessive disorder characterized by myoclonus that progresses in severity over time, tonic-clonic seizures and ataxia.

REFERENCES

1. Fisher, S.E., et al. 1997. Sequence-based exon prediction around the synaptophysin locus reveals a gene-rich area containing novel genes in human proximal Xp. Genomics 45: 340-347.
2. Putilina, T., et al. 1998. Analysis of a human cDNA containing a tissue-specific alternatively spliced LIM domain. Biochem. Biophys. Res. Commun. 252: 433-439.
3. Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.
4. Katoh, M. and Katoh, M. 2003. Identification and characterization of human PRICKLE1 and PRICKLE2 genes as well as mouse Prickle1 and Prickle2 genes homologous to *Drosophila* tissue polarity gene prickle. Int. J. Mol. Med. 11: 249-256.
5. Shimojo, M. and Hersh, L.B. 2003. REST/NRSF-interacting LIM domain protein, a putative nuclear translocation receptor. Mol. Cell. Biol. 23: 9025-9031.
6. Bassuk, A.G., et al. 2008. A homozygous mutation in human PRICKLE1 causes an autosomal-recessive progressive myoclonus epilepsy-ataxia syndrome. Am. J. Hum. Genet. 83: 572-581.

CHROMOSOMAL LOCATION

Genetic locus: Prickle3 (mouse) mapping to X A1.1.

PRODUCT

LMO6 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 LMO6 shRNA Plasmid (m): sc-75432-SH and LMO6 shRNA (m) Lentiviral Particles: sc-75432-V as alternate gene silencing products.

For independent verification of LMO6 (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-75432A, sc-75432B and sc-75432C.

RESEARCH USE

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

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

LMO6 siRNA (m) is recommended for the inhibition of LMO6 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 LMO6 gene expression knockdown using RT-PCR Primer: LMO6 (m)-PR: sc-75432-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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