SANTA CRUZ BIOTECHNOLOGY, INC.

MPP7 siRNA (h): sc-90332

BACKGROUND

The MAGUK (membrane-associated guanylate kinase homologs) family of proteins contain multiple protein-binding domains and are involved in cell junction organization, tumor suppression, and signaling. The MAGUK family is divided into four subfamilies: DLG-like, ZO1-like, p55-like and LIN2-like. MPP7 (MAGUK p55 subfamily member 7), also known as palmitoylated membrane protein 7, is a 576 amino acid protein that belongs to the MAGUK family and assists in the assembly of protein complexes. A peripheral membrane protein that exists as a heterodimer, MPP7 enhances tight junction formation and epithelial cell polarity. MPP7 contains one SH3 domain, a guanylate kinase-like domain, two L27 domains and a single PDZ (DHR) domain. The gene encoding MPP7 maps to human chromosome 10p12.1.

REFERENCES

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2. Caruana, G. 2002. Genetic studies define MAGUK proteins as regulators of epithelial cell polarity. Int. J. Dev. Biol. 46: 511-518.
3. Katoh, M., et al. 2004. Identification and characterization of human MPP7 gene and mouse Mpp7 gene in silico. Int. J. Mol. Med. 13: 333-338.
4. Godreau, D., et al. 2004. MAGUKs: beyond ionic channel anchoring. Med. Sci. 20: 84-88.
5. Bohl, J., et al. 2007. The stardust family protein MPP7 forms a tripartite complex with LIN7 and DLG1 that regulates the stability and localization of DLG1 to cell junctions. J. Biol. Chem. 282: 9392-9400.
6. Stucke, V.M., et al. 2007. The MAGUK protein MPP7 binds to the polarity protein hDlg1 and facilitates epithelial tight junction formation. Mol. Biol. Cell 18: 1744-1755.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610973. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: MPP7 (human) mapping to 10p12.1.

PRODUCT

MPP7 siRNA (h) 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 MPP7 shRNA Plasmid (h): sc-90332-SH and MPP7 shRNA (h) Lentiviral Particles: sc-90332-V as alternate gene silencing products.

For independent verification of MPP7 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-90332A, sc-90332B and sc-90332C.

PROTOCOLS

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

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

MPP7 siRNA (h) is recommended for the inhibition of MPP7 expression in human 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 MPP7 gene expression knockdown using RT-PCR Primer: MPP7 (h)-PR: sc-90332-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.