SANTA CRUZ BIOTECHNOLOGY, INC.

MPP3 siRNA (h): sc-75817

BACKGROUND

MPP3, also known as Discs large homolog 3 (DLG3), is a 585 amino acid protein belonging to the MAGUK family. Proteins in the MAGUK family, including CASK, ZO-1, ZO-2, p55 and MPP2, are known to regulate cell proliferation, intracellular junctions and signaling pathways by interacting with the cytoskeleton. MPP3 contains one guanylate kinase-like domain, one PDZ domain, two L27 domains and one SH3 domain. Via the PDZ domain, MMP3 interacts with the C-terminus of TSLC1. MMP3 has also been found to interact with SR-2A and SR-4.

REFERENCES

1. Smith, S.A., et al. 1996. Isolation of a gene (DLG3) encoding a second member of the discs-large family on chromosome 17q12-q21. Genomics 31: 145-150.
2. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 601114. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Kim, M., et al. 2001. Proteomic and functional evidence for a P2X7 receptor signalling complex. EMBO J. 20: 6347-6358.
4. Shin, B.K., et al. 2003. Global profiling of the cell surface proteome of cancer cells uncovers an abundance of proteins with chaperone function. J. Biol. Chem. 278: 7607-7616.
5. Fukuhara, H., et al. 2003. Association of a lung tumor suppressor TSLC1 with MPP3, a human homologue of *Drosophila* tumor suppressor DLG. Oncogene 22: 6160-6165.
6. Kantardzhieva, A., et al. 2006. MPP3 is recruited to the MPP5 protein scaffold at the retinal outer limiting membrane. FEBS J. 273: 1152-1165.

CHROMOSOMAL LOCATION

Genetic locus: MPP3 (human) mapping to 17q21.31.

PRODUCT

MPP3 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 MPP3 shRNA Plasmid (h): sc-75817-SH and MPP3 shRNA (h) Lentiviral Particles: sc-75817-V as alternate gene silencing products.

For independent verification of MPP3 (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-75817A, sc-75817B and sc-75817C.

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.

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

MPP3 siRNA (h) is recommended for the inhibition of MPP3 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.

GENE EXPRESSION MONITORING

MPP3 (D-8): sc-377522 is recommended as a control antibody for monitoring of MPP3 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MPP3 gene expression knockdown using RT-PCR Primer: MPP3 (h)-PR: sc-75817-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.