

MPP3 siRNA (m): sc-75818

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, MPP3 interacts with the C-terminus of TSLC1. MPP3 has also been found to interact with SR-2A and SR-4.

REFERENCES

1. Smith, S.A., Holik, P., Stevens, J., Mazoyer, S., Melis, R., Williams, B., White, R. and Albertsen, H. 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., Jiang, L.H., Wilson, H.L., North, R.A. and Surprenant, A. 2001. Proteomic and functional evidence for a P2X₇ receptor signalling complex. *EMBO J.* 20: 6347-6358.
4. Shin, B.K., Wang, H., Yim, A.M., Le Naour, F., Brichory, F., Jang, J.H., Zhao, R., Puravs, E., Tra, J., Michael, C.W., Misek, D.E. and Hanash, S.M. 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., Masuda, M., Yageta, M., Fukami, T., Kuramochi, M., Maruyama, T., Kitamura, T., Murakami, Y. and Masuda, M. 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., Alexeeva, S., Versteeg, I. and Wijnholds, J. 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 (mouse) mapping to 11 D.

PRODUCT

MPP3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MPP3 shRNA Plasmid (m): sc-75818-SH and MPP3 shRNA (m) Lentiviral Particles: sc-75818-V as alternate gene silencing products.

For independent verification of MPP3 (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-75818A, sc-75818B and sc-75818C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MPP3 siRNA (m) is recommended for the inhibition of MPP3 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 μ M in 66 μ l. 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 (m)-PR: sc-75818-PR (20 μ l). 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.