



MP19 siRNA (h): sc-97373

BACKGROUND

MP19, also known as MP18, MP20 or LIM2 (lens intrinsic membrane protein 2), is a 173 amino acid multi-pass membrane protein that is expressed in eye lens and belongs to the PMP-22/EMP/MP20 family. Existing as two alternatively spliced isoforms, MP19 is thought to play a role in cell junctional organization and interacts with CaM (calmodulin). The gene encoding MP19 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families, and Fc receptors (FcRs).

REFERENCES

1. Church, R.L., et al. 1992. Assignment of the lens intrinsic membrane protein MP19 structural gene to human chromosome 19. *Curr. Eye Res.* 11: 421-424.
2. Church, R.L., et al. 1993. The human lens fiber-cell intrinsic membrane protein MP19 gene: isolation and sequence analysis. *Curr. Eye Res.* 12: 1057-1065.
3. Olsen, A., et al. 1994. Gene organization of the pregnancy-specific glycoprotein region on human chromosome 19: assembly and analysis of a 700-kb cosmid contig spanning the region. *Genomics* 23: 659-668.
4. Teglund, S., et al. 1994. The pregnancy-specific glycoprotein (PSG) gene cluster on human chromosome 19: fine structure of the 11 PSG genes and identification of 6 new genes forming a third subgroup within the carcinoembryonic antigen (CEA) family. *Genomics* 23: 669-684.
5. Wang, L., et al. 2000. C-CAM1, a candidate tumor suppressor gene, is abnormally expressed in primary lung cancers. *Clin. Cancer Res.* 6: 2988-2993.
6. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.
7. Le Meur, N., et al. 2004. Complete germline deletion of the STK11 gene in a family with Peutz-Jeghers syndrome. *Eur. J. Hum. Genet.* 12: 415-418.
8. Leeb, T., et al. 2004. Comparative human-mouse-rat sequence analysis of the ICAM gene cluster on HSA 19p13.2 and a 185-kb porcine region from SSC 2q. *Gene* 343: 239-244.
9. Barrow, A.D., et al. 2008. The extended human leukocyte receptor complex: diverse ways of modulating immune responses. *Immunol. Rev.* 224: 98-123.

CHROMOSOMAL LOCATION

Genetic locus: LIM2 (human) mapping to 19q13.41.

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.

PRODUCT

MP19 siRNA (h) is a pool of 2 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 MP19 shRNA Plasmid (h): sc-97373-SH and MP19 shRNA (h) Lentiviral Particles: sc-97373-V as alternate gene silencing products.

For independent verification of MP19 (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-97373A and sc-97373B.

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

MP19 siRNA (h) is recommended for the inhibition of MP19 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MP19 gene expression knockdown using RT-PCR Primer: MP19 (h)-PR: sc-97373-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.