SANTA CRUZ BIOTECHNOLOGY, INC.

MOBP siRNA (m): sc-35954

BACKGROUND

The gene encoding MOBP (myelin-associated oligodendrocytic basic protein), a member of the central nervous system myelin-constituting proteins, maps to chromosome 3p22.1. MOBP has many splice variants that share a 68 amino acid N-terminal domain. MOBP-71, MOBP-81A, MOBP-99, and MOBP-169 are MOBP splice variants that contain exon 8b, which is similar to myelin basic protein (MBP) mRNA RTS, however MOBP-69, MOBP-81B, and MOBP-170 lack this exon. The splice variants that contain exon 8b are expressed in myelin, while those lacking exon 8b are retained in the oligodendrocyte soma. Exon 8b-containing variants are directed to sites of myelin sheath assembly by exon 8b, where they play a structural role in myelin formation. Splice variants lacking exon 8b likely play a cellular and/or regulatory role. MOBP is implicated in multiple sclerosis (MS), a human demyelinating disease, and in allergic encephalomyelitis in rodents.

REFERENCES

1. Rameshwar, P., et al. 1995. Substance P (SP) mediates production of stem cell factor and interleukin-1 in bone marrow stroma: potential autoregulatory role for these cytokines in SP receptor expression and induction. Blood 86: 482-490.
2. Rameshwar, P., et al. 1997. Hematopoietic modulation by the tachykinins. Acta Haematol. 98: 59-64.
3. Zerari, F., et al. 1997. Immunoelectron microscopic localization of NK-3 receptor in the rat spinal cord. Neuroreport 8: 2661-2664.
4. Sarau, H.M., et al. 2000. Evidence that the proposed novel human "neurokinin-4" receptor is pharmacologically similar to the human neurokinin-3 receptor but is not of human origin. Mol. Pharmacol. 58: 552-559.
5. Renzi, D., et al. 2000. Substance P (neurokinin-1) and neurokinin A (neurokinin-2) receptor gene and protein expression in the healthy and inflamed human intestine. Am. J. Pathol. 157: 1511-1522.

CHROMOSOMAL LOCATION

Genetic locus: Mobp (mouse) mapping to 9 F4.

PRODUCT

MOBP 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 MOBP shRNA Plasmid (m): sc-35954-SH and MOBP shRNA (m) Lentiviral Particles: sc-35954-V as alternate gene silencing products.

For independent verification of MOBP (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-35954A, sc-35954B and sc-35954C.

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

MOBP siRNA (m) is recommended for the inhibition of MOBP 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.

GENE EXPRESSION MONITORING

MOBP (4C2): sc-517016 is recommended as a control antibody for monitoring of MOBP 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 MOBP gene expression knockdown using RT-PCR Primer: MOBP (m)-PR: sc-35954-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.