SANTA CRUZ BIOTECHNOLOGY, INC.

MIBP1 siRNA (m): sc-38038

BACKGROUND

MIBP1 (c-Myc intron 1 binding protein), previously named MBP-2 and HIV-EP2, is a nuclear protein that contains two zinc-finger regions, a nuclear translocation signal, and an acidic region. MIBP1 is expressed in both embryonic as well as adult brain and skeletal muscle. MIBP1 binds specifically to the SSTR-2 (somatostatin hormone receptor) promoter via the TC box, which is reqired for enhanced promoter activity. The binding of MIBP1 to SSTR-2 activates transcription from the SSTR-2 promoter. Expression of SSTR-2 regulates the adenohypophyseal release of growth hormone, thyroid-stimulating hormone, and prolactin, thereby modulating many cognitive and vegetative functions. The transcription function of MIBP1 implies that MIBP1 may play an important role in the development of nervous and neuroendocrine tissues.

REFERENCES

1. Van 't Veer, L.J., et al. 1992. Structure and expression of major histocompatibility complex-binding protein 2, a 275-kDa zinc finger protein that binds to an enhancer of major compatibility complex class I genes. Proc. Natl. Acad. Sci. USA 89: 8971-8975.
2. Katz, D.M., et al. 1992. Transient expression of somatostatin peptide is a widespread feature of developing sensory and sympathetic neurons in the embryonic rat. J. Neurobiol. 23: 855-870.
3. Kong, H., et al. 1994. Differential expression of messenger RNAs for somatostatin receptor subtypes SSTR1, SSTR2 and SSTR3 in adult rat brain: analysis by RNA blotting and *in situ* hybridization histochemistry. Neuroscience 59: 175-184.
4. Makino, R., et al. 1994. Cloning and characterization of a c-Myc intron binding protein (MIBP1). Nucleic Acids Res. 22: 5679-5685.
5. Epelbaum, J., et al. 1994. The neurobiology of somatostatin. Crit. Rev. Neurobiol. 8: 25-44.
6. Dimech, J., et al. 1995. Somato-statin-induced contraction of human isolated saphenous vein involves SST2 receptor-mediated activation of L-type calcium channels. J. Cardiovasc. Pharmacol. 26: 721-728.
7. Tannenbaum, G.S., et al. 1998. Growth hormone-releasing hormone neurons in the arcuate nucleus express both SST1 and SST2 somatostatin receptor genes. Endocrinology 139: 1450-1453.
8. Dorflinger, U., et al. 1999. Activation of somatostatin receptor II expression by transcription factors MIBP1 and SEF-2 in the murine brain. Mol. Cell. Biol. 19: 3736-3747.

CHROMOSOMAL LOCATION

Genetic locus: Hivep2 (mouse) mapping to 10 A2.

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

MIBP1 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 MIBP1 shRNA Plasmid (m): sc-38038-SH and MIBP1 shRNA (m) Lentiviral Particles: sc-38038-V as alternate gene silencing products.

For independent verification of MIBP1 (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-38038A, sc-38038B and sc-38038C.

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

MIBP1 siRNA (m) is recommended for the inhibition of MIBP1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MIBP1 gene expression knockdown using RT-PCR Primer: MIBP1 (m)-PR: sc-38038-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.