SANTA CRUZ BIOTECHNOLOGY, INC.

Mac-2BP siRNA (m): sc-75723

BACKGROUND

Mac-2BP (Mac-2-binding protein), also known as LGALS3BP (lectin, galactoside-binding, soluble, 3 binding protein), 90K or BTBD17B, is a 585 amino acid protein that is secreted into the extracellular matrix and contains one SRCR domain, one BTB (POZ) domain and one BACK domain. Expressed ubiquitously, Mac-2BP exists as both a homodimer and a homomultimer and functions to promote Integrin-mediated cell adhesion, possibly playing a role in the stimulation of host defenses against tumor cells and viruses. Mac-2BP levels are elevated in HIV-infected hosts, further implicating Mac-2BP in immune system function. The gene encoding Mac-2BP maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Iacobelli, S., et al. 1993. Purification and characterization of a 90 kDa protein released from human tumors and tumor cell lines. FEBS Lett. 319: 59-65.
2. Koths, K., et al. 1993. Cloning and characterization of a human Mac-2-binding protein, a new member of the superfamily defined by the macrophage scavenger receptor cysteine-rich domain. J. Biol. Chem. 268: 14245-14249.
3. Ullrich, A., et al. 1994. The secreted tumor-associated antigen 90K is a potent immune stimulator. J. Biol. Chem. 269: 18401-18407.
4. Calabrese, G., et al. 1995. The gene (LGALS3BP) encoding the serum protein 90K, associated with cancer and infection by the human immunodeficiency virus, maps at 17q25. Cytogenet. Cell Genet. 69: 223-225.
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6. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 600626. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Park, Y.P., et al. 2008. Induction of Mac-2BP by nerve growth factor is regulated by the PI3K/Akt/NFκB-dependent pathway in the HEK293 cell line. BMB Rep. 41: 784-789.

CHROMOSOMAL LOCATION

Genetic locus: Lgals3bp (mouse) mapping to 11 E2.

PRODUCT

Mac-2BP 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 Mac-2BP shRNA Plasmid (m): sc-75723-SH and Mac-2BP shRNA (m) Lentiviral Particles: sc-75723-V as alternate gene silencing products.

For independent verification of Mac-2BP (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-75723A, sc-75723B and sc-75723C.

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

Mac-2BP siRNA (m) is recommended for the inhibition of Mac-2BP 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

Mac-2BP (E-8): sc-374541 is recommended as a control antibody for monitoring of Mac-2BP 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 Mac-2BP gene expression knockdown using RT-PCR Primer: Mac-2BP (m)-PR: sc-75723-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.