

BST-2 siRNA (m): sc-141766

BACKGROUND

Bone marrow stromal cells act as regulators for B-cell growth and development through their surface molecules and cytokines. Bone marrow stromal antigen-2 (BST-2), also designated CD317 antigen, is a single-pass type II membrane protein. BST-2, which is expressed mainly on synovial cell lines and bone marrow stromal cell lines, is primarily expressed in liver, heart, placenta and lung tissues. BST-2 is thought to be involved in pre-B cell growth. It has been implicated in B cell activation in rheumatoid arthritis.

REFERENCES

1. Kaisho, T., et al. 1994. BST-1, a surface molecule of bone marrow stromal cell lines that facilitates pre-B-cell growth. *Proc. Natl. Acad. Sci. USA* 91: 5325-5329.
2. Ishikawa, J., et al. 1995. Molecular cloning and chromosomal mapping of a bone marrow stromal cell surface gene, BST2, that may be involved in pre-B-cell growth. *Genomics* 26: 527-34.
3. Ishihara, K., et al. 1996. Stage-specific expression of mouse BST-1/BP-3 on the early B and T cell progenitors prior to gene rearrangement of antigen receptor. *Int. Immunol.* 8: 1395-1404.
4. Ohtomo, T., et al. 1999. Molecular cloning and characterization of a surface antigen preferentially overexpressed on multiple myeloma cells. *Biochem. Biophys. Res. Commun.* 258: 583-591.
5. Becker, M., et al. 2005. Distinct gene expression patterns in a tamoxifen-sensitive human mammary carcinoma xenograft and its tamoxifen-resistant subline MaCa 3366/TAM. *Mol. Cancer Ther.* 4: 151-168.
6. Loyet, K.M., et al. 2005. Proteomic profiling of surface proteins on Th1 and Th2 cells. *J. Proteome Res.* 4: 400-409.

CHROMOSOMAL LOCATION

Genetic locus: Bst2 (mouse) mapping to 8 B3.3.

PRODUCT

BST-2 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 BST-2 shRNA Plasmid (m): sc-141766-SH and BST-2 shRNA (m) Lentiviral Particles: sc-141766-V as alternate gene silencing products.

For independent verification of BST-2 (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-141766A, sc-141766B and sc-141766C.

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.

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

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

BST-2 (E-4): sc-390719 is recommended as a control antibody for monitoring of BST-2 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 BST-2 gene expression knockdown using RT-PCR Primer: BST-2 (m)-PR: sc-141766-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.