

BST-1 (A-18): sc-7115

BACKGROUND

BST-1 (bone marrow stromal antigen-1) has been identified as a surface molecule that is GPI-anchored to the cell membrane of stromal cells. Both ADP-ribosyl cyclase and cADPR hydrolase activities have been demonstrated by BST-1. cADPR activity is a potential regulator of Insulin secretion in pancreatic β cells. Most pancreatic islet cells express BST-1, indicating a link between BST-1 and Insulin secretion. BST-1 expression has also been found in a wide range of tissues including umbilical vein endothelial cells, monocytes and granulocytes. BST-1 expression in thymus tissue and on B and T cell progenitors undergoing gene rearrangement implicates BST-1 as a useful marker for lymphoid progenitor cells initiation gene rearrangement of their antigen receptors. BST-1 has also been shown to facilitate B cell growth and may act as a receptor.

REFERENCES

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2. Hirata, Y., Kimura, N., Sato, K., Ohsugi, Y., Takasawa, S., Okamoto, H., Ishikawa, J., Kaisho, T., Ishihara, K. and Hirano, T. 1994. ADP ribosyl cyclase activity of a novel bone marrow stromal cell surface molecule, BST-1. *FEBS Lett.* 356: 244-248.
3. Kato, I., Takasawa, S., Akabane, A., Tanaka, O., Abe, H., Takamura, T., Suzuki, Y., Nata, K., Yonekura, H., Yoshimoto, T., et al. 1995. Regulatory role of CD38 (ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase) in Insulin secretion by glucose in pancreatic β cells. Enhanced Insulin secretion in CD38-expressing transgenic mice. *J. Biol. Chem.* 270: 30045-30050.
4. Okuyama, Y., Ishihara, K., Kimura, N., Hirata, Y., Sato, K., Itoh, M., Ok, L.B. and Hirano, T. 1995. Human BST-1 expressed on myeloid cells functions as a receptor molecule. *Biochem. Biophys. Res. Commun.* 228: 838-845.
5. Kajimoti, Y., Miyagawa, J., Ishihara, K., Okuyama, Y., Fujitani, Y., Itoh, M., Yoshida, H., Kaisho, T., Matsuoaka, T., Watada, H., Hanafusa, T., Yamasaki, Y., Kamada, T., Matsuzawa, Y. and Hirano, T., 1996. Pancreatic islet cells express BST-1, a CD38-like surface molecule having ADP-ribosyl cyclase activity. *Biochem. Biophys. Res. Commun.* 219: 941-946.

CHROMOSOMAL LOCATION

Genetic locus: Bst1 (mouse) mapping to 5 B3.

SOURCE

BST-1 (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BST-1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7115 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

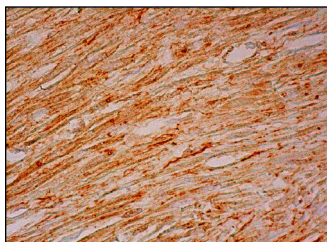
BST-1 (A-18) is recommended for detection of BST-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BST-1 siRNA (m): sc-44751, BST-1 shRNA Plasmid (m): sc-44751-SH and BST-1 shRNA (m) Lentiviral Particles: sc-44751-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



BST-1 (A-18): sc-7115. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic and membrane staining of smooth muscle cells.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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