SANTA CRUZ BIOTECHNOLOGY, INC.

BST-2 (E-4): sc-390719

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: BST2 (human) mapping to 19p13.11; Bst2 (mouse) mapping to 8 B3.3.

SOURCE

BST-2 (E-4) is a mouse monoclonal antibody raised against amino acids 25-159 mapping within an internal region of BST-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BST-2 (E-4) is available conjugated to agarose (sc-390719 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390719 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390719 PE), fluorescein (sc-390719 FITC), Alexa Fluor® 488 (sc-390719 AF488), Alexa Fluor® 546 (sc-390719 AF546), Alexa Fluor® 594 (sc-390719 AF594) or Alexa Fluor® 647 (sc-390719 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390719 AF680) or Alexa Fluor® 790 (sc-390719 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

BST-2 (E-4) is recommended for detection of BST-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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-2 siRNA (h): sc-60294, BST-2 siRNA (m): sc-141766, BST-2 shRNA Plasmid (h): sc-60294-SH, BST-2 shRNA Plasmid (m): sc-141766-SH, BST-2 shRNA (h) Lentiviral Particles: sc-60294-V and BST-2 shRNA (m) Lentiviral Particles: sc-141766-V.

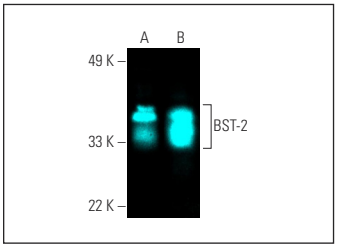
Molecular Weight of BST-2: 30-36 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

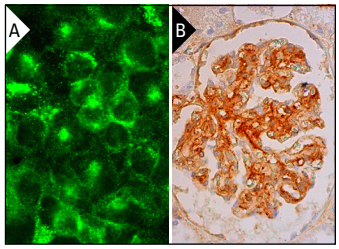
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



BST-2 (E-4) Alexa Fluor® 647: sc-390719 AF647. Direct fluorescent western blot analysis of BST-2 expression in Jurkat (**A**) and HeLa (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



BST-2 (E-4): sc-390719. Immunofluorescence staining of formalin-fixed HeLa cells showing Golgi apparatus, cytoplasmic and membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and membrane staining of cells in glomeruli (**B**).

SELECT PRODUCT CITATIONS

1. Wu, X., et al. 2018. Intrinsic immunity shapes viral resistance of stem cells. Cell 172: 423-438.e25.
2. Deng, H., et al. 2019. CBX6 is negatively regulated by EZH2 and plays a potential tumor suppressor role in breast cancer. Sci. Rep. 9: 197.
3. Goodwin, C.M., et al. 2019. UL26 attenuates IKKβ-mediated induction of interferon-stimulated gene (ISG) expression and enhanced protein ISGylation during human cytomegalovirus infection. J. Virol. 93: e01052-19.
4. Verma, S., et al. 2020. BST-2 regulates interferon γ-dependent decrease in invasion of HTR-8/SVneo cells via Stat1 and Akt signaling pathways and expression of E-cadherin. Cell Adh. Migr. 14: 24-41.
5. Janaka, S.K., et al. 2021. Selective disruption of SERINC5 antagonism by Nef impairs SIV replication in primary $CD4^+$ T cells. J. Virol. 95: e01911-20.
6. Olety, B., et al. 2021. HIV-1 propagation is highly dependent on basal levels of the restriction factor BST-2. Sci. Adv. 7: eabj7398.
7. Dust, K., et al. 2022. Human papillomavirus 16 E6 and E7 oncoproteins alter the abundance of proteins associated with DNA damage response, immune signaling and epidermal differentiation. Viruses 14: 1764.

RESEARCH USE

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