

Bst2 Antibody

Catalog # ASC10718

Product Information

Application	WB, E
Primary Accession	Q8R2Q8
Other Accession	AAH87949 , 56971124
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	19152
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Bst2 antibody can be used for detection of Bst2 by Western blot at 1 - 2 μ g/mL.

Additional Information

Gene ID	69550
Other Names	Bone marrow stromal antigen 2, BST-2, HM1.24 antigen, CD317, Bst2
Target/Specificity	Bst2;
Reconstitution & Storage	Bst2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Bst2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Bst2
Function	IFN-induced antiviral host restriction factor which efficiently blocks the release of diverse mammalian enveloped viruses by directly tethering nascent virions to the membranes of infected cells. Acts as a direct physical tether, holding virions to the cell membrane and linking virions to each other. The tethered virions can be internalized by endocytosis and subsequently degraded or they can remain on the cell surface. In either case, their spread as cell-free virions is restricted. Its target viruses belong to diverse families, including retroviridae: human immunodeficiency virus type 1 (HIV-1), mouse mammary tumor virus (MMTV) and murine leukemia virus (MLV), filoviridae: ebola virus (EBOV), arenaviridae: lassa virus (LASV), and rhabdoviridae: vesicular stomatitis virus (VSV). Can inhibit cell surface proteolytic activity of

MMP14 causing decreased activation of MMP15 which results in inhibition of cell growth and migration. Can stimulate signaling by LILRA4/ILT7 and consequently provide negative feedback to the production of IFN by plasmacytoid dendritic cells in response to viral infection. Plays a role in the organization of the subapical actin cytoskeleton in polarized epithelial cells.

Cellular Location

Golgi apparatus, trans-Golgi network. Cell membrane; Single-pass type II membrane protein. Cell membrane; Lipid-anchor, GPI-anchor. Late endosome. Membrane raft. Cytoplasm Apical cell membrane. Note=Shuttles between the cell membrane, where it is present predominantly in membrane/lipid rafts, and the trans-Golgi network. Forms a complex with MMP14 and localizes to the cytoplasm (By similarity).

Tissue Location

In naive mice, specifically expressed on type I interferon-producing cells (at protein level)

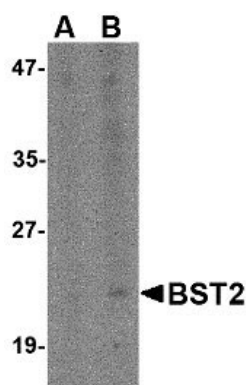
Background

Bst2 Antibody: Bst2 was first identified as a novel terminal B-cell-restricted antigen termed HM1.24 that is expressed on certain bone marrow cells as well as other tissues. The surface expression of Bst2 on fibroblast cell lines facilitated the stromal cell-dependent growth of DW34, a pre-B-cell line, suggesting that this protein is involved in pre-B-cell growth. Later experiments also showed it to be upregulated in several myeloma cells. More recently, Bst2 was identified an inhibitor of retroviral release from human cells whose activity is antagonized by the HIV-1 accessory protein Vpu. While Bst2 caused retention of virions on cell surfaces or endocytosis into Bst2-positive compartments, its depletion abolished the viral requirement for Vpu for virus release. This activity may represent a potential therapeutic strategy for the treatment of HIV/AIDS.

References

Goto T, Kennel SJ, Abe M, et al. A novel membrane antigen selectively expressed on terminally differentiated human B cells. *Blood*1994; 84:1922-30.
Ishikawa J, Kaisho T, Tomizawa H, et al. Molecular cloning and chromosomal mapping of a bone marrow stromal cell surface gene, BST2, that may be involved in pre-B-cell growth. *Genomics*1995; 26:527-34.
Ohtomo T, Sugamata Y, Ozaki Y, et al. Molecular cloning and characterization of a surface antigen preferentially overexpressed on multiple myeloma cells. *Biochem. Biophys. Res. Commun.*1999; 258:583-91.
Neil SJ, Zang T, and Bieniasz PD. Tetherin inhibits retrovirus release and is antagonized by HIV-1 Vpu. *Nature*2008; 451:425-30.

Images



Western blot analysis of Bst2 in Daudi cell lysate with Bst2 antibody at (A) 1 and (B) 2 µg/mL.