BST2 Positive Control

PRODUCT OVERVIEW

Product Name	BST2, Positive Control
Full Product Name	BST2 Positive Control
Product Gene Name	BST2 positive control
Product Synonym Names	Bone marrow stromal antigen 2; Bone marrow stromal cell antigen 2; BST 2; CD 317; CD317 antigen; HM1.24 antigen; NPC A 7; Tetherin antibody
Form/Format	Western Blot Positive Control
Preparation and Storage	-20• degree C for long term storage
Matching Pairs	Antibody: BST2 (MBS540010) Positive Control: BST2 (MBS542577)
Matching Pairs	Antibody: BST2 (MBS540223) Positive Control: BST2 (MBS542577)
Matching Pairs	Antibody: BST2 (MBS540283) Positive Control: BST2 (MBS542577)
Molecular Weight	18,394 Da
OMIM	600534
3D Structure	ModBase 3D Structure for Q10589
Immunogen	Purified Protein
Expression	Liver, lung, heart and placenta. Lower levels in pancreas, kidney, skeletal msucle and brain. Overexpressed in multiple myeloma cells. B-cells, T-cells, monocytes, NK cells and dendritic cells. Induced by type I interforns. Down regulated by viral antagonistic factors.
Molecular Function	Antiviral defense; B-cell activation; Immunity; Innate immunity
Structure	Parallel homodimer; disulfide linked. Cytoplasmic domain interacts with ARHGAP44 and MMP14.
Subcellular Location	Gogli apparatus, trans-golgi network; Cell membrane, Single-pass type II membrane protein. Lipid anchor, GPI anchor; Late endosome; Membrane raft; Cytoplasm; Apical cell membrane
Applications Tested/Suitable for BST2 positive control	Western Blot (WB)
Application Notes for BST2 positive control	Western Blot: 1:500-1:1,000
Related Product Information for BST2 positive control	Western Blot Positive Control Bonemarrow stromal antigen 2 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.
Other Notes	Small volumes of BST2 positive control vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for BST2 purchase	MBS542577 is a positive control targeting BST2.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BST2. It may not necessarily be applicable to this product.

NCBI GI #	62897809
NCBI GeneID	684
NCBI Accession #	BAD96844
UniProt Primary Accession #	Q10589
UniProt Secondary Accession #	Q53G07; A8K4Y4
UniProt Related Accession #	Q10589
NCBI Official Full Name	bone marrow stromal cell antigen 2 variant, partial
NCBI Official Synonym Full Names	bone marrow stromal cell antigen 2
NCBI Official Symbol	BST2
NCBI Official Synonym Symbols	CD317; TETHERIN
UniProt Protein Name	Bone marrow stromal antigen 2
UniProt Synonym Protein Names	HM1.24 antigen; Tetherin; CD_antigen: CD317
Protein Family	Bone marrow stromal antigen
UniProt Gene Name	BST2
UniProt Synonym Gene Names	BST-2
UniProt Entry Name	BST2_HUMAN
NCBI Protein Information	bone marrow stromal antigen 2
NCBI Summary for BST2	Bone marrow stromal cells are involved in the growth and development of B-cells. The specific function of the protein encoded by the bone marrow stromal cell antigen 2 is undetermined; however, this protein may play a role in pre-B-cell growth and in rheumatoid arthritis. [provided by RefSeq, Jul 2008]

UniProt Comments for BST2	BST2: 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), human immunodeficiency virus type 2 (HIV-2), simian immunodeficiency viruses (SIVs), equine infectious anemia virus (EIAV), feline immunodeficiency virus (FIV), prototype foamy virus (PFV), Mason- Pfizer monkey virus (MPMV), human T-cell leukemia virus type 1 (HTLV-1), Rous sarcoma virus (RSV) and murine leukemia virus (MLV), flaviviridae: hepatitis C virus (HCV), filoviridae: ebola virus (EBOV) and marburg virus (MARV), arenaviridae: lassa virus (LASV) and machupo virus (MACV), herpesviridae: kaposis sarcoma- associated herpesvirus (KSHV), rhabdoviridae: vesicular stomatitis virus (VSV), orthomyxoviridae: influenza A virus, and paramyxoviridae: nipah virus. 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. Belongs to the tetherin family. Protein type: Cell development/differentiation; Membrane protein, integral; Membrane protein, GPI anchor Chromosomal Location of Human Ortholog: 19p13.1 Cellular Component: apical plasma membrane; cell surface; cytoplasm; Golgi apparatus; integral to plasma membrane; late endosome; lipid raft; membrane; multivesicular body; plasma membrane Molecular Function: metalloendopeptidase inhibitor activity; protein binding; protein homodimerization activity; signal transducer activity Biological Process: B cell activation; cell proliferation; cell-cell signaling; defense response to virus; humoral immune response; innate immune response; multicellular organismal development; negative regulation of cell growth; negative regulation of cell migration; negative regulation of plasmacytoid dendritic cell cytokine production; negative regulation of viral genome replication; positive regulation of I-kappaB kinase/NF-kappaB cascade; regulation of actin cytoskeleton organization and biogenesis; response to virus
Research Articles on BST2	**1.** BST-2 restricts Hepatitis B virus production at intracellular multivesicular bodies.
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