

BST2 (D5V5Z) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	28-40	Rabbit IgG	#Q10589	684

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

BST2 (D5V5Z) Rabbit mAb recognizes endogenous levels of total BST2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val134 of human BST2 protein.

Background

BST2 (CD317, Tetherin, HM1.24) is a type II transmembrane glycoprotein functioning as a major mediator of the innate immune defense against the dissemination of enveloped viruses by tethering virion on the cell surface (1). BST2 has an N-terminal cytoplasmic tail for endocytosis and cytoskeletal signaling, a transmembrane domain, an extracellular domain containing putative disulfide bonds and coiled-coil region for homodimer formation, and a C-terminal GPI domain for membrane anchoring (2,3). Both the transmembrane domain and the GPI domain can insert either into the cell membrane or the viral envelope membrane and hold them together to prevent viral release. Some viruses encode proteins, such as HIV-1 and Vpu, respectively, to act as antagonists to counteract BST2 (2,3). BST2 is overexpressed in gastrointestinal cancers, breast cancer, lung cancer, and multiple myeloma (4-7). BST2 monoclonal antibody targeting myeloma or lung cancer cells induces cellular cytotoxicity and cell death (ADCC, antibody-dependent cell-mediated cytotoxicity). Thus, BST2 serves as a potential target for tumor immunotherapy.

Background References

1. Le Tortorec, A. et al. (2011) *Viruses* 3, 520-40.
2. Douglas, J.L. et al. (2010) *PLoS Pathog* 6, e1000913.
3. Kuhl, B.D. et al. (2011) *J Neuroimmune Pharmacol* 6, 188-201.
4. Mukai, S. et al. (2016) *Ann Surg Oncol*, 594-602.
5. Sayeed, A. et al. (2013) *PLoS One* 8, e67191.
6. Wang, W. et al. (2009) *Cancer Immunol Immunother* 58, 967-76.
7. Harada, T. and Ozaki, S. (2014) *Biomed Res Int* 2014, 965384.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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