Technical Data Sheet

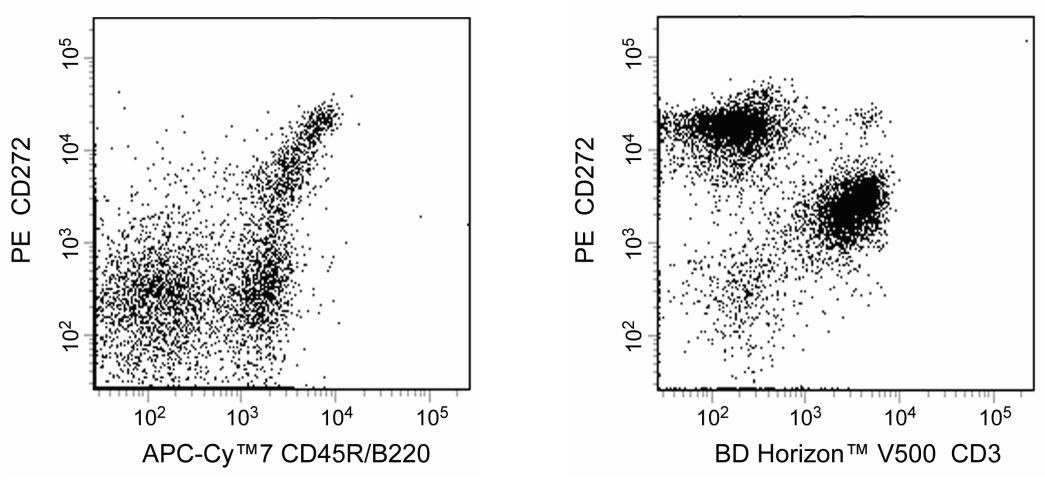
PE Hamster Anti-Mouse CD272

Product Information

Material Number:	**563774**
Alternate Name:	Btla; B and T lymphocyte attenuator; B- and T-lymphocyte-associated protein
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	HMBT-6B2
Immunogen:	Mouse CD272
Isotype:	Hamster IgG
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HMBT-6B2 monoclonal antibody specifically binds to CD272 which is also known as B- and T-lymphocyte attenuator (BTLA). CD272 is a type 1 transmembrane glycoprotein and a member of the Ig superfamily. CD272 is variably expressed on developing and mature T and B lymphocytes, NKT cells, NK cells, macrophages and dendritic cells. CD272 expression is upregulated by activated T cells including Th1, Th2, and T follicular helper cells and by anergic T cells. CD272 is structurally similar to CD152/CTLA-4 and CD279/PD-1 and functions as a coinhibitory receptor for B and T cell responses. Herpesvirus entry mediator (HVEM), also known as CD270 and LIGHT-R, has been identified as a ligand for CD272. The crosslinking of CD272 by HVEM inhibits T-cell proliferation and cytokine production.



Two color flow cytometric analysis of CD272 expression on mouse bone marrow cells and splenocytes. *Mouse bone marrow cells (Left Panel) and splenic leucocytes (Right Panel) were stained with PE Hamster Anti-Mouse CD272, APC-Cy™7 Rat Anti-Mouse CD45R/B220, and BD Horizon™ V500 Syrian Hamster Anti-Mouse CD3e antibodies. The two-color flow cytometric dot plot show the correlated expression patterns of either CD45R/B220 or CD3e versus CD272 for gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
552094	APC-Cy™7 Rat Anti-Mouse CD45R	0.1 mg	RA3-6B2
560771	V500 Syrian Hamster anti-Mouse CD3e	0.1 mg	500A2
553972	PE Hamster IgG1 κ Isotype Control	0.1 mg	A19-3

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Cy is a trademark of Amersham Biosciences Limited.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Han P, Goularte OD, Rufner K, Wilkinson B, Kaye J. An inhibitory Ig superfamily protein expressed by lymphocytes and APCs is also an early marker of thymocyte positive selection. *J Immunol.* 2004; 172(10):5931-5939. (Biology)

Hurchla MA, Sedy JR, Gavrieli M, Drake CG, Murphy TL, Murphy KM. B and T lymphocyte attenuator exhibits structural and expression and is highly induced in anergic CD4+T cells. *J Immunol.* 2005; 174(6):3377-3385. (Biology)

Ishida W, Fukuda K, Kajisako M, et al. B and T lymphocyte attenuator regulates the development of antigen-induced experimental conjunctivitis. *Graefes Arch Clin Exp Ophthalmol.* 2012; 250(2):289-295. (Immunogen: In vivo exacerbation)

Nurieva RI, Chung Y, Martinez GJ, et al. Bcl6 mediates the development of T follicular helper cells. *Science.* 2009; 325(5943):1001-1005. (Biology)

Sedy JR, Gavrieli M, Potter KG, et al. B and T lymphocyte attenuator regulates T cell activation through interaction with herpesvirus entry mediator. *Nat Immunol.* 2005; 6(1):90-98. (Biology)

Watanabe N, Gavrieli M, Sedy JR, et al. BTLA is a lymphocyte inhibitory receptor with similarities to CTLA-4 and PD-1. *Nat Immunol.* 2003; 4(7):670-679. (Biology)

Watanabe N, Nakajima H. Coinhibitory molecules in autoimmune diseases. *Clin Dev Immunol.* 2012; 2012:1-7. (Biology)

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