

Technical Data Sheet

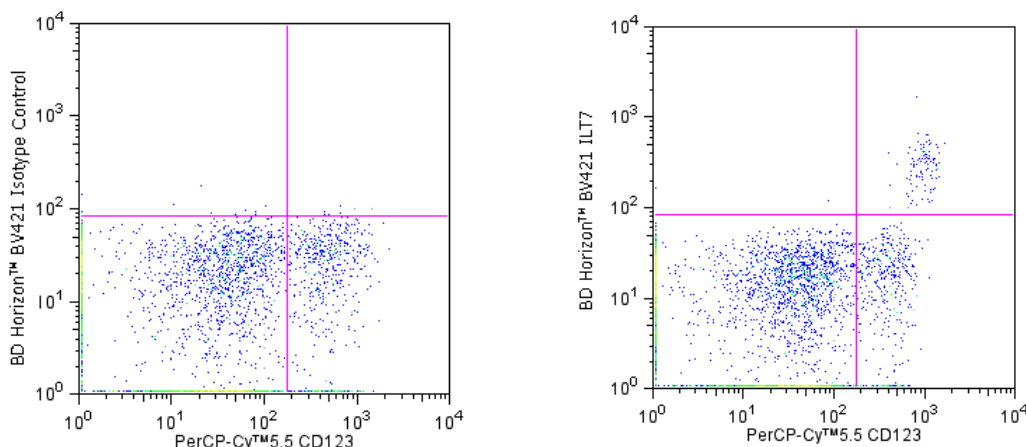
BV421 Mouse Anti-Human ILT7 (CD85g)**Product Information**

Material Number:	562578
Alternate Name:	LILRA4; CD85g; ILT7; ILT-7; Immunoglobulin-like transcript 7
Size:	50 tests
Vol. per Test:	5 µl
Clone:	17G10.2 (also known as 17.2)
Immunogen:	ILT7-FcεRIγ-transfected 2B4 cells
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 17G10.2 monoclonal antibody specifically binds to human Immunoglobulin Like Transcript 7 (ILT7), also known as CD85g. The ILT7 protein is encoded by the *LILRA4* (Leukocyte Immunoglobulin Like Receptor subfamily A member 4) gene. ILT7 is a member of immunoglobulin-like transcripts (ILT) or leukocyte immunoglobulin-like receptor (LIR) gene family. ILT7 is selectively expressed on plasmacytoid dendritic cells (pDC) but not on myeloid dendritic cells or other peripheral blood leukocytes. In response to IL-3, IL-3 receptor complex signaling downregulates ILT7 expression by pDC. ILT7 associates with the FcεRIγ signal adapter protein to form a receptor complex that can signal through activation of an immunoreceptor-based tyrosine activation motif (ITAM)-mediated signaling pathway. Signaling through the ILT7-FcεRIγ receptor complex negatively regulates the innate immune functions of pDC. ILT7 crosslinking inhibits TLR responses by pDC such as the stimulated production of type I interferon and other cytokines. Bone marrow stromal cell antigen 2 (BST2) has been identified as a biological ligand for ILT7.

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Multicolor flow cytometric analysis of ILT7 expressed on human peripheral blood cells. Human peripheral blood mononuclear cells were stained with FITC Lineage Cocktail 1 (lin 1) (Cat. No. 340546), PerCP-Cy™5.5 Mouse Anti-Human CD123 antibody (Cat. No. 558714/560904) and either BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; Left Panel) or BD Horizon™ BV421 Mouse Anti-Human ILT7 (CD85g) (Cat. No. 562578; Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of CD123 versus ILT7 (or Ig Isotype control) for Lin-1 negative-gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

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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 BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40
554656	Stain Buffer (FBS)	500 ml	(none)
558714	PerCP-Cy™5.5 Mouse anti-Human CD123	100 tests	7G3
560904	PerCP-Cy™5.5 Mouse Anti-Human CD123	25 tests	7G3

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.
9. Cy is a trademark of Amersham Biosciences Limited.

References

Cao W, Bover L. Signaling and ligand interaction of ILT7: receptor-mediated regulatory mechanisms for plasmacytoid dendritic cells. *Immunol Rev.* 2010; 234(1):163-176. (Clone-specific: Inhibition)

Cao W, Bover L, Cho M, et al. Regulation of TLR7/9 responses in plasmacytoid dendritic cells by BST2 and ILT7 receptor interaction. *J Exp Med.* 2009; 206(7):1603-1614. (Clone-specific: Activation, Calcium Flux, Flow cytometry, Inhibition)

Cao W, Rosen DB, Ito T, et al. Plasmacytoid dendritic cell-specific receptor ILT7-Fc epsilonRI gamma inhibits Toll-like receptor-induced interferon production. *J Exp Med.* 2006; 203(6):1399-1405. (Immunogen: Activation, Calcium Flux, Flow cytometry, Functional assay, Inhibition)

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