

Technical Data Sheet

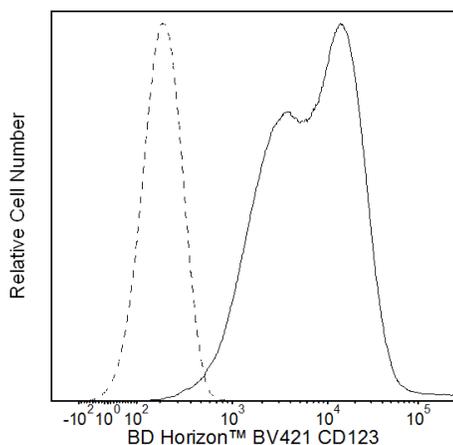
BV421 Mouse Anti-Human CD123**Product Information**

Material Number:	563362
Alternate Name:	IL3RA; IL-3RA; IL-3R α ; IL-3R-alpha; Interleukin-3 receptor subunit alpha
Size:	50 tests
Vol. per Test:	5 μ l
Clone:	7G3
Immunogen:	Human IL-3Ra-transfected cells
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and \leq 0.09% sodium azide.

Description

The 7G3 monoclonal antibody specifically reacts with human CD123, the 70 kDa IL-3 Receptor α (IL-3R α) chain. CD123 associates with CD131, the 120-140 kDa Common β chain to form the IL-3 Receptor Complex. CD131 is shared with the receptors for interleukins IL-5 and GM-CSF. IL-3R α is expressed on hematopoietic progenitors and plays an important role in hematopoietic progenitor cell growth and differentiation. It is also expressed by mast cells, macrophages and a CD5+ B cell subset. This antibody has been reported to block the binding of IL-3 to high and low affinity IL-3 receptors. In functional experiments, this antibody was found to inhibit acute myeloid leukemia cell proliferation, basophil histamine release, endothelial cell-mediated IL-8 secretion, and neutrophil transmigration. This antibody has been reported to be useful for immunoprecipitation, Western blot and immunofluorescent staining for flow cytometry. At the Fifth HLDA Workshop, the human IL-3 receptor was designated CD123.

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.



Flow cytometric analysis of human CD123 (IL-3R α) expressed on cells transfected with human IL3RA cDNA. Cells transfected with human IL3RA cDNA were stained with either BD Horizon™ BV421 Mouse Anti-Human CD123 antibody (Cat. No. 563362; solid line histogram) or BD Horizon™ BV421 Mouse IgG2a, κ Isotype Control (Cat. No. 562439; dashed line histogram). Flow cytometric fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometry 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 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

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554656	Stain Buffer (FBS)	500 ml	(none)
562439	BV421 Mouse IgG2a, k Isotype Control	50 µg	G155-178

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. 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. Brilliant Violet™ 421 is a trademark of Sirigen.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

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Zola H, Swart B, Nicholson I, Voss E. *Leukocyte and Stromal Cell Molecules. The CD Markers*. Hoboken, New Jersey: John Wiley & Sons, Inc.; 2007:1-581. (Biology)

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