

# Technical Data Sheet

## BV605 Mouse Anti-Human CD123

### Product Information

Material Number:	740412
Size:	50 µg
Clone:	9F5
Alternative Name:	IL3RA; IL-3RA; IL-3Rα; IL-3R-alpha; Interleukin-3 receptor subunit alpha
Reactivity:	Tested in Development:Human
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	Human IL-3Rα Transfected Cell Line
Application:	Flow cytometry(Qualified)
Concentration:	0.2 mg/ml
Workshop No.:	VI C-67
Entrez Gene ID:	3563
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The 9F5 monoclonal antibody specifically binds to CD123. CD123 is the 70 kDa IL-3 receptor α chain (IL-3Rα) that associates with the 120-140 kDa β subunit (CD131/Common β-chain/βc) to form the functional IL-3 receptor complex. The βc chain is also shared with distinct α chain subunits to form the functional heterodimeric receptors for interleukins IL-5 and GM-CSF. IL-3Rα is expressed on a subset of peripheral blood dendritic cells, myeloid precursors, basophils, mast cells, macrophages, and megakaryocytes. Reports indicate that IL-3Rα is also expressed on lymphocytes. The IL-3R plays an important role in hematopoietic progenitor cell growth and differentiation. This antibody does not block binding of IL-3 to the IL-3 receptor.

This antibody is conjugated to BD Horizon™ BV605 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max of 602-nm, BD Horizon BV605 can be excited by a violet laser and detected with a standard 610/20-nm filter set. BD Horizon BV605 is a tandem fluorochrome of BD Horizon BV421 and an acceptor dye with an Em max at 605-nm. Due to the excitation of the acceptor dye by the green (532 nm) and yellow-green (561 nm) lasers, there will be significant spillover into the PE and BD Horizon PE-CF594 detectors off the green or yellow-green lasers. BD Horizon BV605 conjugates are very bright, often exhibiting brightness equivalent to PE conjugates and can be used as a third color off of the violet laser.

### 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 BV605 under optimal conditions that minimize unconjugated dye and antibody.

### Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

### Suggested Companion Products

Catalog Number	Name	Size	Clone
564219	Human BD Fc Block™	50 µg	Fc1
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	

349202  
562652

Lysing Solution 10X Concentrate  
BV605 Mouse IgG1, κ Isotype Control

100 mL  
50 µg

X40

## Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
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 [wwwbdbiosciences.com/colors](http://wwwbdbiosciences.com/colors).
7. Please refer to [wwwbdbiosciences.com/us/s/resources](http://wwwbdbiosciences.com/us/s/resources) for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Violet 605 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.

## References

Kishimoto T, Tadimitsu Kishimoto .. et al., ed. Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996. New York: Garland Pub.; 1997.

Korpelainen EI, Gamble JR, Smith WB, et al. The receptor for interleukin 3 is selectively induced in human endothelial cells by tumor necrosis factor alpha and potentiates interleukin 8 secretion and neutrophil transmigration.. Proc Natl Acad Sci USA. 1993; 90(23):11137-41. (Clone-specific: Flow cytometry, Immunofluorescence).

Macardle PJ, Chen Z, Shih CY, et al. Characterization of human leucocytes bearing the IL-3 receptor. Cell Immunol. 1996; 168(1):59-68. (Clone-specific: Flow cytometry).

Smith WB, Guida L, Sun Q, et al. Neutrophils activated by granulocyte-macrophage colony-stimulating factor express receptors for interleukin-3 which mediate class II expression. Blood. 1995; 86(10):3938-3944. (Clone-specific: Flow cytometry).

Sun Q, Woodcock JM, Rapoport A, et al. Monoclonal antibody 7G3 recognizes the N-terminal domain of the human interleukin-3 (IL-3) receptor alpha-chain and functions as a specific IL-3 receptor antagonist.. Blood. 1996; 87(1):83-92. (Clone-specific: Immunoprecipitation, Western blot).

## BD Biosciences

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