

## Brilliant Violet 605™ anti-human CD123 Antibody

<b>Catalog# / Size</b>	306025 / 25 tests 306026 / 100 tests
<b>Clone</b>	6H6
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	IL-3R $\alpha$ , IL-3 Receptor alpha
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	CD123 is the 70 kD transmembrane $\alpha$ chain of the IL-3 receptor. Alone, CD123 binds IL-3 with low affinity; when CD123 associates with CDw131 (common $\beta$ chain), it binds IL-3 with high affinity. CD123 does not transduce intracellular signals upon binding IL-3 and requires the $\beta$ chain for this function. CD123 is expressed by myeloid precursors, macrophages, dendritic cells, mast cells, basophils, megakaryocytes, and some B cells.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Human IL-3R $\alpha$ transfected COS cells.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 605™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a>. For flow cytometric staining, the suggested use of this reagent is 5 <math>\mu</math>l per million cells in 100 <math>\mu</math>l staining volume or 5 <math>\mu</math>l per 100 <math>\mu</math>l of whole blood.</p> <p>Brilliant Violet 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. <b>Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.</b> Refer to your instrument manual or manufacturer for support. Brilliant Violet 605™ is a trademark of Sirigen Group Ltd.</p> <p><a href="#">Learn more about Brilliant Violet™.</a></p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	Clone 6H6 does not inhibit IL-3 binding to low- or high-affinity IL-3Rs. Additional reported applications (for the relevant formats) include: Western blotting <sup>1</sup> , immunoprecipitation <sup>1</sup> , and immunohistochemical staining of acetone-fixed frozen sections <sup>2</sup> and also paraformaldehyde fixed

paraffin embedded tissue<sup>7</sup>.

### Application References

(PubMed link indicates BioLegend citation)

1. Sun Q, *et al.* 1996. *Blood* 87:83. (IP, WB)
2. Herling M, *et al.* 2003. *Blood* 101:5007. (IHC)
3. Charles N, *et al.* 2010. *Nat. Med.* 16:701. (FC) [PubMed](#)
4. Martin-Gayo E, *et al.* 2010. *Blood* 115:5366. [PubMed](#)
5. Chen SC, *et al.* 2010. *Arch Dermatol Res.* 302:113. [PubMed](#)
6. Liu Y, *et al.* 2012. *Food Chem Toxicol.* 50:1920. [PubMed](#)
7. Peduzzi E, *et al.* 2007. *J. Invest. Dermatol.* 127:638. (IHC)

### Product Citations

1. Wright AKA, *et al.* 2017. *J Allergy Clin Immunol.* 140:1430. [PubMed](#)
2. Tong J, *et al.* 2021. *Cell Stem Cell.* 28(3):502-513.e6. [PubMed](#)
3. Yankova E, *et al.* 2021. *Nature.* 593:597. [PubMed](#)
4. Rai S, *et al.* 2022. *Nat Commun.* 13:5346. [PubMed](#)

### RRID

AB\_2562115 (BioLegend Cat. No. 306025)  
AB\_2563826 (BioLegend Cat. No. 306026)

## Antigen Details

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<b>Structure</b>	Ig superfamily, type I transmembrane glycoprotein, associates with CDw131, 70 kD
<b>Distribution</b>	Myeloid precursors, basophils, mast cells, macrophages, dendritic cells, megakaryocytes, subset of lymphocytes
<b>Function</b>	Hematopoietic cell proliferation, differentiation
<b>Ligand/Receptor</b>	IL-3
<b>Cell Type</b>	Basophils, Dendritic cells, Hematopoietic stem and progenitors, Lymphocytes, Macrophages, Mast cells, Megakaryocytes
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules, Cytokine/Chemokine Receptors
<b>Antigen References</b>	1. Miyajima A, <i>et al.</i> 1993. <i>Blood</i> 82:1960.
<b>Gene ID</b>	<a href="#">3563</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

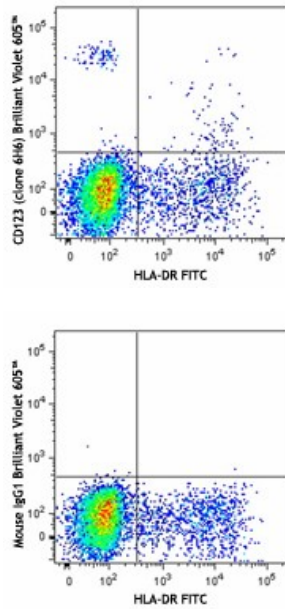
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Biotin anti-human CD123, PE anti-human CD123, Purified anti-human CD123, PE/Cyanine5 anti-human CD123, PE/Cyanine7 anti-human CD123, APC anti-human CD123, FITC anti-human CD123, PerCP/Cyanine5.5 anti-human CD123, Brilliant Violet 421™ anti-human CD123, Brilliant Violet 650™ anti-human CD123, Brilliant Violet 510™ anti-human CD123, Alexa Fluor® 647 anti-human CD123, Brilliant Violet 605™ anti-human CD123, Purified anti-human CD123 (Maxpar® Ready), Brilliant Violet 711™ anti-human CD123, Brilliant Violet 785™ anti-human CD123, PE/Dazzle™ 594 anti-human CD123, Alexa Fluor® 488 anti-human CD123, TotalSeq™-A0064 anti-human CD123, Alexa Fluor® 700 anti-human CD123, APC/Fire™ 750 anti-human CD123, Pacific Blue™ anti-human CD123, TotalSeq™-C0064 anti-human CD123, TotalSeq™-B0064 anti-human CD123, TotalSeq™-D0064 anti-human CD123, PerCP anti-human CD123, GMP PE/Cyanine7 anti-human CD123, APC/Fire™ 810 anti-human CD123 Antibody

## Product Data

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Human peripheral blood lymphocytes were stained with HLA-DR FITC and CD123 (clone 6H6) Brilliant Violet 605™ (top) or mouse IgG1 Brilliant Violet 605™ isotype control (bottom).



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