

## Spark Violet™ 423 anti-human CD8a Antibody

<b>Catalog# / Size</b>	301075 / 25 tests 301076 / 100 tests
<b>Clone</b>	RPA-T8
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	IV T171
<b>Other Names</b>	T8, Leu2
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	CD8a is a 32-34 kD type I glycoprotein. It forms a homodimer (CD8a/a) or heterodimer (CD8a/b) with CD8b. CD8, also known as T8 and Leu2, is a member of the immunoglobulin superfamily found on the majority of thymocytes, a subset of peripheral blood T cells, and NK cells (which express almost exclusively CD8a homodimers). CD8 acts as a co-receptor with MHC class I-restricted T cell receptors in antigen recognition and T cell activation, and has been shown to play a role in thymic differentiation. Two domains in CD8a are important for function: the extracellular IgSF domain binds the $\alpha 3$ domain of MHC class I and the cytoplasmic CXCP motif binds the tyrosine kinase p56 Lck.

### Product Details

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<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	Chimpanzee, Baboon, Pigtailed Macaque, Sooty Mangabey
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<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 Spark Violet™ 423 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>	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 $\mu$ L per million cells in 100 $\mu$ L staining volume or 5 $\mu$ L per 100 $\mu$ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.  * Spark Violet™ 423 has a maximum excitation of 400 nm and a maximum emission of 415 nm.
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	The RPA-T8 antibody does not block the binding of HIT8a antibody to CD8a. Additional reported applications of this antibody (for the relevant formats) include: immunohistochemical staining of paraformaldehyde-fixed frozen sections <sup>3</sup> and costimulation of T cell responses <sup>4</sup> . This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue. The Ultra-LEAF™ purified antibody (Endotoxin <0.1 EU/ $\mu$ g, Azide-Free, 0.2 $\mu$ m filtered) is recommended for functional assays (Cat. Nos. 301073 & 301074).
<b>Application References</b>	<ol style="list-style-type: none"> <li>Knapp W, <i>et al.</i> Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.</li> <li>Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.</li> <li>Mack CL, <i>et al.</i> 2004. <i>Pediatr. Res.</i> 56:79. (IHC)</li> <li>Magidovich E, <i>et al.</i> 2007. <i>P. Natl. Acad. Sci. USA</i> 104:13022.</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

5. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. [PubMed](#)
6. Kmiecik M, *et al.* 2009. *J. Transl. Med.* 7:89. (FC) [PubMed](#)
7. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
8. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
9. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
10. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)

**RRID** AB\_2910375 (BioLegend Cat. No. 301075)  
 AB\_2910375 (BioLegend Cat. No. 301076)

## Antigen Details

<b>Structure</b>	Ig superfamily, homodimer or heterodimer with CD8 $\beta$ , 32-34 kD
<b>Distribution</b>	Majority of thymocytes, T cell subset, NK cells
<b>Function</b>	MHC class I co-receptor, thymic differentiation, T cell activation
<b>Ligand/Receptor</b>	MHC Class I molecules
<b>Cell Type</b>	Dendritic cells, NK cells, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	1. Barclay N, <i>et al.</i> 1993. <i>The Leucocyte Antigen FactsBook.</i> Academic Press Inc. San Diego.
<b>Gene ID</b>	<a href="#">925</a>

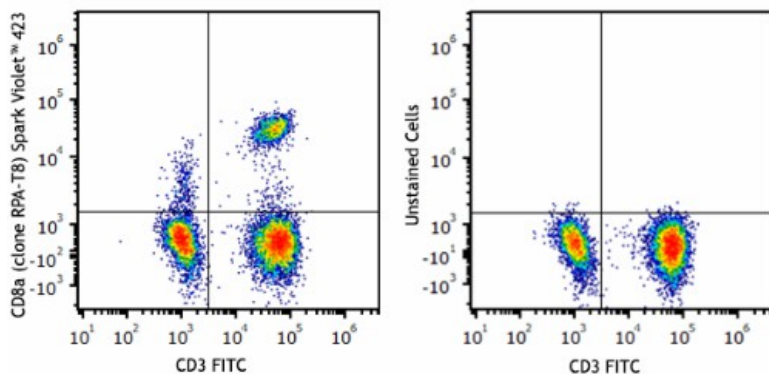
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

APC anti-human CD8a, APC/Cyanine7 anti-human CD8a, Biotin anti-human CD8a, FITC anti-human CD8a, PE anti-human CD8a, PE/Cyanine5 anti-human CD8a, PE/Cyanine7 anti-human CD8a, Purified anti-human CD8a, Alexa Fluor® 488 anti-human CD8a, Alexa Fluor® 647 anti-human CD8a, Pacific Blue™ anti-human CD8a, Alexa Fluor® 700 anti-human CD8a, PerCP anti-human CD8a, PerCP/Cyanine5.5 anti-human CD8a, Brilliant Violet 421™ anti-human CD8a, Brilliant Violet 570™ anti-human CD8a, Brilliant Violet 605™ anti-human CD8a, Brilliant Violet 650™ anti-human CD8a, Brilliant Violet 711™ anti-human CD8a, Brilliant Violet 785™ anti-human CD8a, Brilliant Violet 510™ anti-human CD8a, Purified anti-human CD8a (Maxpar® Ready), Alexa Fluor® 594 anti-human CD8a, PE/Dazzle™ 594 anti-human CD8a, APC/Fire™ 750 anti-human CD8a, TotalSeq™-A0080 anti-human CD8a, TotalSeq™-B0080 anti-human CD8a, TotalSeq™-C0080 anti-human CD8a, Ultra-LEAF™ Purified anti-human CD8a, Spark Violet™ 423 anti-human CD8a Antibody

## Product Data



Human peripheral blood lymphocytes were stained with anti-human CD3 FITC and anti-human CD8a (clone RPA-T8) Spark Violet™ 423 (left) or CD3 FITC only (right).

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