

Brilliant Violet 421™ anti-human CD8 Antibody

Catalog# / Size	344747 / 25 tests 344748 / 100 tests
Clone	SK1
Regulatory Status	RUO
Other Names	T8, Leu2
Isotype	Mouse IgG1, κ
Description	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

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Chimpanzee, Pigtailed Macaque, Sooty Mangabey
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 μl per million cells in 100 μl staining volume or 5 μl per 100 μl of whole blood.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</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>
Excitation Laser	Violet Laser (405 nm)
Application Notes	Clone SK1 recognizes the a chain of CD8. Additional reported applications (for the relevant formats) include: proteogenomics ⁸ , immunohistochemistry of acetone-fixed frozen tissue sections, and spatial biology (IBEX) ^{9,10} . This clone was tested in-house and does not demonstrate utility for formalin-fixed paraffin-embedded (FFPE) human tonsil sections.

- Application References**
1. Ledbetter JA, *et al.* 1981. *J. Exp. Med.* 153:310.
 2. Campanelli R, *et al.* 2002. *Intl. Immunol.* 14:39.
 3. Evans RL, *et al.* 1981. *Immunol.* 78:544.
 4. Wooldridge L, *et al.* 2005. *J. Bio. Chem.* 280:27491.
 5. Ch'el IL, *et al.* 2011. *J Exp Med.* 208:633. [PubMed](#)
 6. Carbone A, *et al.* 1999. *Blood* 93:2319. (IHC-F)
 7. Ahmed A, *et al.* 2001. *J. Pathol.* 193:383. (IHC)
 8. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)
 9. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
 10. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

- Product Citations**
1. Wang Y, *et al.* 2021. *Sci Rep.* 1.429861111. [PubMed](#)
 2. Derada Troletti C, *et al.* 2021. *Cell Reports.* 35(9):109201. [PubMed](#)
 3. Kim N, *et al.* 2020. *Nat Commun.* 2.045138889. [PubMed](#)

RRID AB_2629583 (BioLegend Cat. No. 344747)
AB_2629584 (BioLegend Cat. No. 344748)

Antigen Details

Structure	Ig superfamily, homodimer or heterodimer with CD8b, 32-34 kD
Distribution	Majority of thymocytes, T cell subset, NK cells
Function	MHC class I co-receptor, thymic differentiation, T cell activation
Ligand/Receptor	MHC Class I molecules
Cell Type	NK cells, T cells, Thymocytes
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	1. Barclay N, <i>et al.</i> 1993. <i>The Leucocyte Antigen FactsBook.</i> Academic Press Inc. San Diego.
Gene ID	925

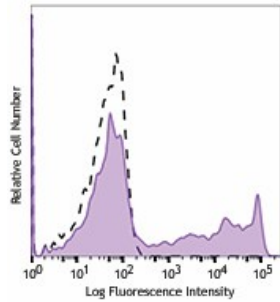
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Alexa Fluor® 647 anti-human CD8, Brilliant Violet 650™ anti-human CD8, Purified anti-human CD8, FITC anti-human CD8, PE anti-human CD8, PerCP anti-human CD8, PerCP/Cyanine5.5 anti-human CD8, PE/Cyanine7 anti-human CD8, APC/Cyanine7 anti-human CD8, Alexa Fluor® 488 anti-human CD8, Pacific Blue™ anti-human CD8, Biotin anti-human CD8, APC anti-human CD8, Alexa Fluor® 700 anti-human CD8, Purified anti-human CD8 (Maxpar® Ready), Brilliant Violet 510™ anti-human CD8, Brilliant Violet 711™ anti-human CD8, Brilliant Violet 785™ anti-human CD8, Brilliant Violet 605™ anti-human CD8, PE/Dazzle™ 594 anti-human CD8, APC/Fire™ 750 anti-human CD8, Brilliant Violet 421™ anti-human CD8, TotalSeq™-A0046 anti-human CD8, TotalSeq™-C0046 anti-human CD8, Brilliant Violet 750™ anti-human CD8, TotalSeq™-B0046 anti-human CD8, Spark Blue™ 550 anti-human CD8, APC/Fire™ 810 anti-human CD8, PE/Fire™ 640 anti-human CD8, PE/Fire™ 700 anti-human CD8, TotalSeq™-D0046 anti-human CD8, GMP APC anti-human CD8, PE/Cyanine5 anti-human CD8 Antibody, Spark UV™ 387 anti-human CD8, GMP PE anti-human CD8, GMP PE/Cyanine7 anti-human CD8, Spark NIR™ 685 anti-human CD8, KIRAVIA Blue 520™ anti-human CD8, GMP FITC anti-human CD8, GMP Pacific Blue™ anti-human CD8

Product Data



Human peripheral blood lymphocytes were stained with CD8 (clone SK1) Brilliant Violet 421™ (filled histogram) or mouse IgG1, κ Brilliant Violet 421™ isotype control (open histogram).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587