

## Brilliant Violet 650™ anti-human CD8 Antibody

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| <b>Catalog# / Size</b>   | 344729 / 25 tests<br>344730 / 100 tests  |
| <b>Clone</b>             | SK1  |
| <b>Regulatory Status</b> | RUO  |
| <b>Other Names</b>       | T8, Leu2   |
| <b>Isotype</b>           | Mouse IgG1, κ  |
| <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 α3 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>    | African Green, Chimpanzee, 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 Brilliant Violet 650™ 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 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.<br><br>Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 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 650™ is a trademark of Sirigen Group Ltd.<br><br><a href="#">Learn more about Brilliant Violet™.</a><br><br>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. |
| <b>Excitation Laser</b>       | Violet Laser (405 nm)  |
| <b>Application Notes</b>      | Clone SK1 recognizes the a chain of CD8. Additional reported applications (for the relevant formats) include: proteogenomics <sup>8</sup> , immunohistochemistry of acetone-fixed frozen tissue sections,  |

and spatial biology (IBEX)<sup>9,10</sup>. This clone was tested in-house and does not demonstrate utility for formalin-fixed paraffin-embedded (FFPE) human tonsil sections.

## Application References

(PubMed link indicates BioLegend citation)

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. Dhariwala MO, *et al.* 2020. *Cell Rep Med.* 1:100132. [PubMed](#)
2. Huang C, *et al.* 2020. *Theranostics.* 10:10498. [PubMed](#)
3. Krishnan S, *et al.* 2021. *Clin Exp Immunol.* 203:458. [PubMed](#)
4. Meckiff BJ, *et al.* 2020. *Cell.* 183(5):1340-1353.e16. [PubMed](#)
5. Hunter S, *et al.* 2018. *J Hepatol.* 69:654. [PubMed](#)
6. Pham TNQ, *et al.* 2020. *Cell Reports.* 29(9):2770-2782.e5.. [PubMed](#)
7. Riese P, *et al.* 2022. *Nat Commun.* 13:6894. [PubMed](#)
8. Li H, *et al.* 2020. *Front Oncol.* 1.477083333. [PubMed](#)
9. Hackstein CP, *et al.* 2022. *Nat Commun.* 13:7472. [PubMed](#)

## RRID

AB\_2564509 (BioLegend Cat. No. 344729)  
AB\_2564510 (BioLegend Cat. No. 344730)

## Antigen Details

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| <b>Structure</b>          | Ig superfamily, homodimer or heterodimer with CD8b, 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>          | NK cells, T cells, Thymocytes  |
| <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

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[Cell Surface Flow Cytometry Staining Protocol](#)

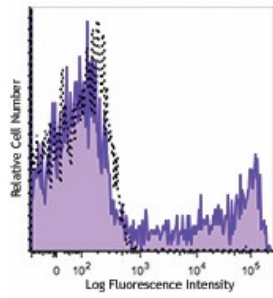
## Other Formats

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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, GMP PerCP anti-human CD8, Spark Violet™ 500 anti-human CD8

## Product Data

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Human peripheral blood lymphocytes were stained with CD8 (clone SK1) Brilliant Violet 650™ (filled histogram) or mouse IgG1, κ Brilliant Violet 650™ isotype control (open histogram).

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