

## Brilliant Violet 510™ anti-mouse CD3 Antibody

<b>Catalog# / Size</b>	100233 / 125 µL 100234 / 50 µg
<b>Clone</b>	17A2
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	T cell antigen receptor complex, T3
<b>Isotype</b>	Rat IgG2b, κ
<b>Description</b>	CD3, also known as T3, is a member of the Ig superfamily and primarily expressed on T cells, NK-T cells, and at different levels on thymocytes during T cell differentiation. CD3 is composed of CD3ε, δ, γ and ζ chains. It forms a TCR complex by associating with TCR α/β or γ/δ chains. CD3 plays a critical role in TCR signal transduction, T cell activation, and antigen recognition by binding the peptide/MHC antigen complex

### Product Details

---

<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	γδTCR-positive T-T hybridoma D1
<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 510™ under optimal conditions.
<b>Concentration</b>	µg sizes: 0.2 mg/mL µL sizes: 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 using the µg size, the suggested use of this reagent is ≤0.5 µg per million cells in 100 µl volume. For flow cytometric staining using the µl size, 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. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 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 510™ 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>	Additional reported application (for relevant formats) include: spatial biology (IBEX) <sup>1,2</sup> .

## Application References

1. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
2. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

(PubMed link indicates BioLegend citation)

## Product Citations

1. Su Y, *et al.* 2022. *J Hematol Oncol.* 15:99. [PubMed](#)
2. Lechuga-Vieco AV, *et al.* 2020. *Sci Adv.* 6:eaba5345. [PubMed](#)
3. Platt DJ, *et al.* 2021. *Cell Reports.* 35(6):109113. [PubMed](#)
4. Wang L, *et al.* 2019. *Cell Rep.* 29:1848. [PubMed](#)
5. Hirata Y *et al.* 2018. *Cell stem cell.* 22(3):445-453. [PubMed](#)
6. Stegelmeier AA, *et al.* 2022. *Biomedicines.* 10:. [PubMed](#)
7. Zhang YS, *et al.* 2018. *Cancer Biol Ther.* 19:735. [PubMed](#)
8. Feizi N, *et al.* 2021. *Cell Death Dis.* 12:1026. [PubMed](#)
9. Menzel L, *et al.* 2021. *Cell Rep.* 37:109878. [PubMed](#)
10. Delacher M, *et al.* 2021. *Immunity.* 54(4):702-720.e17. [PubMed](#)
11. Reyes RM, *et al.* 2021. *Oncoimmunology.* 10:2006529. [PubMed](#)
12. Xiong A, *et al.* 2022. *EBioMedicine.* 83:104239. [PubMed](#)
13. Okamoto T, *et al.* 2020. *Cancer Res.* 3580:80. [PubMed](#)
14. Qiu F, *et al.* 2022. *J Cancer.* 13:2893. [PubMed](#)
15. Ciecko AE, *et al.* 2019. *Cell Rep.* 29:3073. [PubMed](#)
16. Kuhn NF, *et al.* 2020. *Nat Commun.* 4.74375. [PubMed](#)
17. Bittner-Eddy PD, *et al.* 2017. *Front Immunol.* 1.304166667. [PubMed](#)
18. Zhang B, *et al.* 2021. *Nat Biomed Eng.* 5:1288. [PubMed](#)
19. Wang F, *et al.* 2018. *Carcinogenesis.* 39:889. [PubMed](#)
20. Hu Y, *et al.* 2022. *J Nanobiotechnology.* 20:417. [PubMed](#)
21. Mara AB, *et al.* 2022. *NPJ Vaccines.* 7:86. [PubMed](#)
22. Sordé L, *et al.* 2017. *Immunity, Inflammation, and Disease.* 10.1002/iid3.167. [PubMed](#)
23. Landon J Edgar *et al.* 2018. *Cell chemical biology.* 26(1):131-136. [PubMed](#)
24. Hombrink P, *et al.* 2016. *Nat Immunol.* 17:1467-1478. [PubMed](#)
25. Wijewarnasuriya D, *et al.* 2020. *Cancer Immunol Res.* 0.841666667. [PubMed](#)
26. Cabrera-Perez J, *et al.* 2016. *J Immunol.* 197: 1692 - 1698. [PubMed](#)
27. Cabrera-Perez C, *et al.* 2015. *J Immunol.* 194:1609-20. [PubMed](#)
28. Lu YJ, *et al.* 2021. *Cell Rep.* 36:109696. [PubMed](#)
29. Fernández-Orth J, *et al.* 2020. *Eur J Immunol.* . [PubMed](#)
30. Heil J, *et al.* 2021. *Nat Commun.* 12:6963. [PubMed](#)
31. Cerina M, *et al.* 2017. *Brain Behav Immun.* 59:103-117. [PubMed](#)
32. Bahmani B, *et al.* 2021. *Nat Commun.* 12:1999. [PubMed](#)
33. Hu Y, *et al.* 2021. *J Nanobiotechnology.* 19:416. [PubMed](#)
34. Li X, *et al.* 2021. *Front Immunol.* 12:779560. [PubMed](#)
35. Yang F, *et al.* 2021. *Nat Commun.* 12:3424. [PubMed](#)
36. Ren X, *et al.* 2021. *Cell Death Dis.* 12:484. [PubMed](#)

## RRID

AB\_2561387 (BioLegend Cat. No. 100233)  
AB\_2562555 (BioLegend Cat. No. 100234)

## Antigen Details

---

<b>Structure</b>	Ig superfamily, CD3/TCR, 20 kD
<b>Distribution</b>	Thymocytes (differentiation dependent), mature T cells, NK-T cells
<b>Function</b>	Antigen recognition, TCR signal transduction, T cell activation
<b>Ligand/Receptor</b>	Peptide antigen/MHC-complex
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.</li><li>2. Davis MM. 1990. <i>Annu. Rev. Biochem.</i> 59:475.</li><li>3. Weiss A, <i>et al.</i> 1994. <i>Cell</i> 76:263.</li></ol>
<b>Gene ID</b>	<a href="#">12502</a>

## Related Protocols

---

[Cell Surface Flow Cytometry Staining Protocol](#)

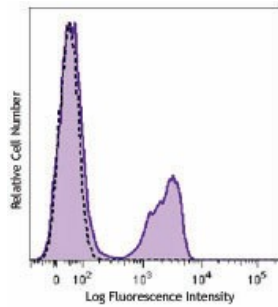
## Other Formats

---

FITC anti-mouse CD3, PE anti-mouse CD3, Purified anti-mouse CD3, Alexa Fluor® 647 anti-mouse CD3, Alexa Fluor® 488 anti-mouse CD3, Pacific Blue™ anti-mouse CD3, Alexa Fluor® 700 anti-mouse CD3, PerCP/Cyanine5.5 anti-mouse CD3, PE/Cyanine7 anti-mouse CD3, APC/Cyanine7 anti-mouse CD3, Brilliant Violet 421™ anti-mouse CD3, Brilliant Violet 570™ anti-mouse CD3, Brilliant Violet 650™ anti-mouse CD3, Brilliant Violet 785™ anti-mouse CD3, Brilliant Violet 510™ anti-mouse CD3, APC anti-mouse CD3, Ultra-LEAF™ Purified anti-mouse CD3, Brilliant Violet 605™ anti-mouse CD3, Alexa Fluor® 594 anti-mouse CD3, Brilliant Violet 711™ anti-mouse CD3, Biotin anti-mouse CD3, PE/Dazzle™ 594 anti-mouse CD3, APC/Fire™ 750 anti-mouse CD3, Brilliant Violet 750™ anti-mouse CD3, TotalSeq™-A0182 anti-mouse CD3, TotalSeq™-B0182 anti-mouse CD3, Spark Blue™ 550 anti-mouse CD3, Spark NIR™ 685 anti-mouse CD3, TotalSeq™-C0182 anti-mouse CD3, APC/Fire™ 810 anti-mouse CD3, PE/Fire™ 640 anti-mouse CD3, Spark YG™ 570 anti-mouse CD3, PE/Fire™ 700 anti-mouse CD3, PE/Cyanine5 anti-mouse CD3, Spark Blue™ 574 anti-mouse CD3 Antibody, Spark Violet™ 423 anti-mouse CD3, PE/Fire™ 810 anti-mouse CD3, Spark Red™ 718 anti-mouse CD3

## Product Data

---



C57BL/6 mouse splenocytes were stained with CD3 (clone 17A2) Brilliant Violet 510™.

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](http://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](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587