

## APC/Cyanine7 anti-mouse CD3 Antibody

<b>Catalog# / Size</b>	100221 / 25 µg 100222 / 100 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

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<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.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with APC/Cyanine7 under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<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 =0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	Additional reported application (for relevant formats) include: spatial biology (IBEX) <sup>1,2</sup> .
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name APC/Cy7 to APC/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our APC/Cyanine7 products. Please contact <a href="#">Technical Service</a> if you have any questions.
<b>Application References</b>	<ol style="list-style-type: none"><li>1. Radtke AJ, <i>et al.</i> 2020. <i>Proc Natl Acad Sci U S A.</i> 117:33455-65. (SB) <a href="#">PubMed</a></li><li>2. Radtke AJ, <i>et al.</i> 2022. <i>Nat Protoc.</i> 17:378-401. (SB) <a href="#">PubMed</a></li></ol>
<b>Product Citations</b>	<ol style="list-style-type: none"><li>1. Mackel JJ, <i>et al.</i> 2022. <i>Front Cell Infect Microbiol.</i> 12:974175. <a href="#">PubMed</a></li><li>2. Chung Y, <i>et al.</i> 2014. <i>J Vis Exp.</i> 89: 51660. <a href="#">PubMed</a></li><li>3. Sun L, <i>et al.</i> 2021. <i>Cancer Cell.</i> .: <a href="#">PubMed</a></li><li>4. Ferrere G, <i>et al.</i> 2021. <i>JCI Insight.</i> 6.: <a href="#">PubMed</a></li><li>5. Shimizu K, <i>et al.</i> 2020. <i>Molecular Cell.</i> 77(5):937-950.e6.. <a href="#">PubMed</a></li><li>6. Viny AD, <i>et al.</i> 2019. <i>Cell Stem Cell.</i> 25:682. <a href="#">PubMed</a></li><li>7. Alissafi T, <i>et al.</i> 2018. <i>J Clin Invest.</i> 128:3840. <a href="#">PubMed</a></li><li>8. Israelow B, <i>et al.</i> 2020. <i>bioRxiv.</i> . <a href="#">PubMed</a></li><li>9. Marco Barros R, <i>et al.</i> 2016. <i>Cell.</i> 167: 203-218. <a href="#">PubMed</a></li></ol>

10. Marques RM, *et al.* 2021. Cell Death Differ. 28:3140. [PubMed](#)
11. Turner JA, *et al.* 2020. Immunity. 53:1202. [PubMed](#)
12. Chen S, *et al.* 2022. Cancer Discov. . [PubMed](#)
13. Coleby R, *et al.* 2021. Clin Exp Rheumatol. :39. [PubMed](#)
14. Durgeau A, *et al.* 2018. Nat Commun. 9:5097. [PubMed](#)
15. Silver AC, *et al.* 2018. Heliyon. 4:e00579. [PubMed](#)
16. Diao L, *et al.* 2022. iScience. 25:105511. [PubMed](#)
17. Tirado-Gonzalez I, *et al.* 2021. Cancer Discov. 11:2924. [PubMed](#)
18. Herman JD, *et al.* 2021. Nat Commun. 12:6853. [PubMed](#)
19. Tilstam PV, *et al.* 2021. J Clin Invest. 131:. [PubMed](#)
20. Ma C, *et al.* 2021. Signal Transduct Target Ther. 6:353. [PubMed](#)
21. Leimkühler NB, *et al.* 2020. Cell Stem Cell. 28:637. [PubMed](#)
22. Haertel E, *et al.* 2018. Eur J Immunol. 48:1001. [PubMed](#)
23. Choi H *et al.* 2019. Cell Rep. 27(3):806-819 . [PubMed](#)
24. Tordesillas L, *et al.* 2018. Nat Commun. 9:5238. [PubMed](#)
25. Zheng H, *et al.* 2021. Frontiers in Cell and Developmental Biology. 9:641527. [PubMed](#)
26. Zhou Y, *et al.* 2016. Acta Pharmacol Sin. 10.1038/aps.2016.102. [PubMed](#)
27. Inoue D, *et al.* 2021. Nat Genet. 53:707. [PubMed](#)
28. Chung H, *et al.* 2021. Immune Netw. 21:e28. [PubMed](#)
29. Rafiq S, *et al.* 2018. Nat Biotechnol. 36:847. [PubMed](#)
30. Mathews J, *et al.* 2014. PLoS One. 9:97707. [PubMed](#)
31. Shi L, *et al.* 2021. Immunity. . [PubMed](#)
32. Super M, *et al.* 2021. Nat Biomed Eng. Online ahead of print. [PubMed](#)
33. Yoshimi A, *et al.* 2019. Nature. 574:273. [PubMed](#)
34. Wang Z, *et al.* 2020. Autophagy. 1:. [PubMed](#)
35. Spees A, *et al.* 2014. Infect Immun . 82:1692. [PubMed](#)
36. Wei JL, *et al.* 2021. J Immunother Cancer. 9: . [PubMed](#)
37. Han JP, *et al.* 2022. Sci Adv. 8:eabj6901. [PubMed](#)
38. Zhao F, *et al.* 2022. Front Immunol. 13:873720. [PubMed](#)
39. Kunimoto H, *et al.* 2018. Cancer Cell. 33:44. [PubMed](#)
40. Katsinas N, *et al.* 2022. J Clin Med. 11:. [PubMed](#)
41. Xue L, *et al.* 2021. BMC Cancer. 21:1134. [PubMed](#)
42. Zhang B, *et al.* 2021. Nat Biomed Eng. 5:1288. [PubMed](#)
43. Kleppe M *et al.* 2018. Cancer cell. 33(1):29-43 . [PubMed](#)
44. Pandey V, *et al.* 2021. eLife. 0.416666666666667. [PubMed](#)
45. Socodato R, *et al.* 2020. Sci Signal. 13: . [PubMed](#)
46. Liu X, *et al.* 2022. Nat Cancer. . [PubMed](#)
47. Grune J, *et al.* 2022. Nat Cardiovasc Res. 1:649. [PubMed](#)
48. Adane B, *et al.* 2019. Cell Rep. 27:238. [PubMed](#)
49. Rashidi M, *et al.* 2019. J Immunol. 203:736. [PubMed](#)
50. Schadt L, *et al.* 2020. Cell Reports. 29(5):1236-1248.e7.. [PubMed](#)
51. Habib S, *et al.* 2018. Infect Immun. 86:e00019. [PubMed](#)
52. Harb H, *et al.* 2021. Immunity. 54(6):1186-1199.e7. [PubMed](#)
53. Alameh MG, *et al.* 2021. Immunity. 54:2877. [PubMed](#)
54. Rohner L, *et al.* 2020. Sci Rep. 0.570833333. [PubMed](#)
55. Lang V, *et al.* 2021. Elife. 10: [PubMed](#)
56. Li X, *et al.* 2020. Nat Commun. 4.877777778. [PubMed](#)
57. Voss M, *et al.* 2015. Am J Physiol Lung Cell Mol Physiol. 309: L188 - L195. [PubMed](#)
58. Fischer FA, *et al.* 2021. Proc Natl Acad Sci U S A. 118:. [PubMed](#)
59. Robles-Oteiza C, *et al.* 2021. Dis Model Mech. 14:. [PubMed](#)
60. Li J, *et al.* 2022. Nat Commun. 13:4032. [PubMed](#)
61. Zhu W, *et al.* 2019. FASEB J. 33:5208. [PubMed](#)
62. Jandke A, *et al.* 2020. Nat Commun. 3.075694444. [PubMed](#)
63. Zhang S, *et al.* 2022. Nat Commun. 13:4744. [PubMed](#)
64. Kwok T, *et al.* 2022. Front Aging. 3:838943. [PubMed](#)
65. Miyauchi E, *et al.* 2020. Nature. 585:102. [PubMed](#)
66. Revathikumar P, *et al.* 2018. PLoS One. 13:e0193210. [PubMed](#)
67. Dhar P, *et al.* 2021. Commun Biol. 4:905. [PubMed](#)
68. Do-Thi VA, *et al.* 2021. Cancers (Basel). 13:. [PubMed](#)
69. Teater M, *et al.* 2018. Nat Commun. 9:222. [PubMed](#)
70. Draijer C, *et al.* 2018. Sci Rep. 8:5105. [PubMed](#)
71. Yin S *et al.* 2019. Cancer cell. 35(2):283-296 . [PubMed](#)
72. Sanchez HN, *et al.* 2020. Nat Commun. 0.5. [PubMed](#)
73. Bellomo A, *et al.* 2020. Immunity. 53(1):127-142.e7. [PubMed](#)
74. Kim MY, *et al.* 2022. Nat Commun. 13:3296. [PubMed](#)
75. Clemente-Casares X, *et al.* 2017. Immunity. 47:974. [PubMed](#)
76. Chen C, *et al.* 2020. Cell Rep. 2136:30. [PubMed](#)
77. Bagati A, *et al.* 2020. Cancer Cell. 39(1):54-67.e9. [PubMed](#)
78. Israelow B, *et al.* 2020. J Exp Med. 217:00:00. [PubMed](#)
79. Chao JL, *et al.* 2021. Cell Rep Med. 2:100399. [PubMed](#)
80. Rouse MD, *et al.* 2020. Front Microbiol. 11:414. [PubMed](#)
81. Katzmarski N, *et al.* 2021. Nat Immunol. 22:1382. [PubMed](#)
82. Dokoshi T, *et al.* 2020. Cell Rep. 30:61. [PubMed](#)
83. Jie Z, *et al.* 2014. J Immunol. 192:3289. [PubMed](#)
84. Szodoray P, *et al.* 2021. Cell Reports. 36(6):109525. [PubMed](#)
85. Li C, *et al.* 2021. Chem Biol Drug Des. 97:1151. [PubMed](#)
86. Sheng D, *et al.* 2022. J Immunother Cancer. 10:. [PubMed](#)
87. Luo H, *et al.* 2019. Cell Rep. 26:945. [PubMed](#)
88. Sharma R, *et al.* 2021. J Neuroinflammation. 72:18. [PubMed](#)
89. Siolas D, *et al.* 2021. Cell Reports. 36(8):109578. [PubMed](#)

90. Hildreth AD, *et al.* 2020. STAR Protoc. 1:100113. [PubMed](#)  
 91. Wen J, *et al.* 2015. J Pharmacol Sci. 128: 116-124. [PubMed](#)  
 92. Wang K, *et al.* 2021. Nat Commun. 12:4558. [PubMed](#)  
 93. Rodrigues KA, *et al.* 2021. Sci Adv. 7:eabj6538. [PubMed](#)  
 94. Kojima T, *et al.* 2016. Sci Rep. 6:36457. [PubMed](#)  
 95. Nakazawa S, *et al.* 2020. Sci Rep. 10:14559. [PubMed](#)

**RRID** AB\_2057374 (BioLegend Cat. No. 100221)  
 AB\_2242784 (BioLegend Cat. No. 100222)

## 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>	1. Barclay A, <i>et al.</i> 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Davis MM. 1990. <i>Annu. Rev. Biochem.</i> 59:475. 3. Weiss A, <i>et al.</i> 1994. <i>Cell</i> 76:263.
<b>Gene ID</b>	<a href="#">12502</a>

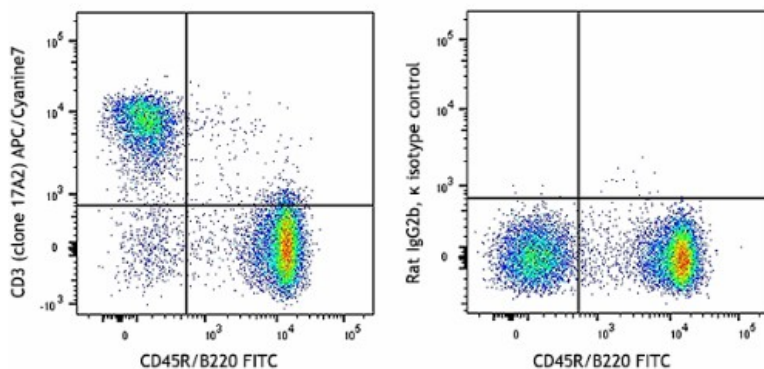
## Related Protocols

[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 splenocytes were stained with CD45R/B220 FITC and CD3 (clone 17A2) APC/Cyanine7 (left) or Rat IgG2b, κ APC/Cyanine7 isotype control (right).

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