

Purified anti-mouse CD3 Antibody

Catalog# / Size	100201 / 50 µg 100202 / 500 µg
Clone	17A2
Regulatory Status	RUO
Other Names	T cell antigen receptor complex, T3
Isotype	Rat IgG2b, κ
Description	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

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	γδTCR-positive T-T hybridoma D1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested IHC-F - Verified IP, ICC - Reported in the literature. not verified in house
Recommended Usage	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 ≤ 0.25 µg per million cells in 100 µl volume. For immunohistochemistry on frozen tissue sections, a concentration of 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported application (for relevant formats) include: spatial biology (IBEX) ^{1,2} .
Application References	1. Radtke AJ, <i>et al.</i> 2020. <i>Proc Natl Acad Sci U S A.</i> 117:33455-65. (SB) PubMed 2. Radtke AJ, <i>et al.</i> 2022. <i>Nat Protoc.</i> 17:378-401. (SB) PubMed
(PubMed link indicates BioLegend citation)	
Product Citations	1. Pietras E, <i>et al.</i> 2016. <i>Nat Cell Biol.</i> 10.1038/ncb3346. PubMed 2. Abdel-Gadir A, <i>et al.</i> 2019. <i>Nat Med.</i> 25:1164. PubMed 3. Hamada T, <i>et al.</i> 2008. <i>J Immunol.</i> 180:1843. PubMed 4. Garo LP, <i>et al.</i> 2021. <i>Nat Commun.</i> 12:2419. PubMed 5. Gern BH, <i>et al.</i> 2021. <i>Cell Host Microbe.</i> 29(4):594-606.e6. PubMed 6. Kulkarni NN, <i>et al.</i> 2020. <i>J Invest Dermatol.</i> 140:645. PubMed 7. Boyd DF, <i>et al.</i> 2020. <i>Nature.</i> 587:466. PubMed 8. Xiao J, <i>et al.</i> 2012. <i>Arterioscler Thromb Vasc Biol.</i> 32:386. PubMed 9. Bergstrom K, <i>et al.</i> 2008. <i>Infect Immun.</i> 76:796. PubMed 10. Mazor R, <i>et al.</i> 2018. <i>Proc Natl Acad Sci U S A.</i> 115:E733. PubMed 11. Burrello C, <i>et al.</i> 2018. <i>Front Med (Lausanne).</i> 5:21. PubMed 12. Hawse WF, <i>et al.</i> 2019. <i>J Immunol.</i> 203:2771. PubMed 13. Zhao J, <i>et al.</i> 2021. <i>JCI Insight.</i> 6:. PubMed

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RRID AB_312658 (BioLegend Cat. No. 100201)
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Antigen Details

Structure	lg superfamily, CD3/TCR, 20 kD
Distribution	Thymocytes (differentiation dependent), mature T cells, NK-T cells
Function	Antigen recognition, TCR signal transduction, T cell activation
Ligand/Receptor	Peptide antigen/MHC-complex
Antigen References	<ol style="list-style-type: none"> 1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> 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.
Gene ID	12502

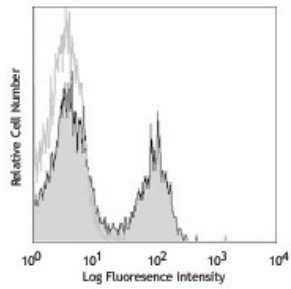
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

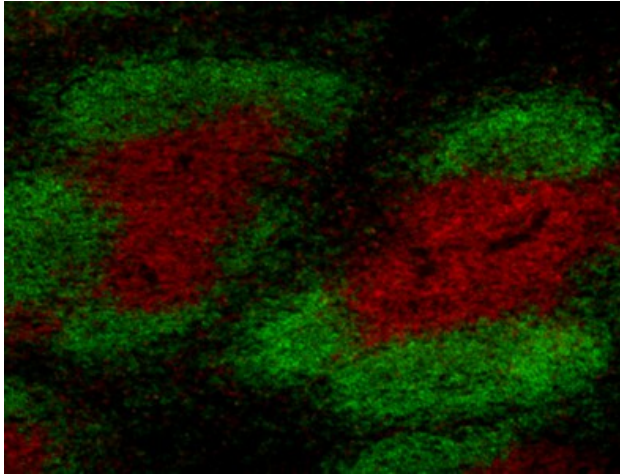
Other Formats

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

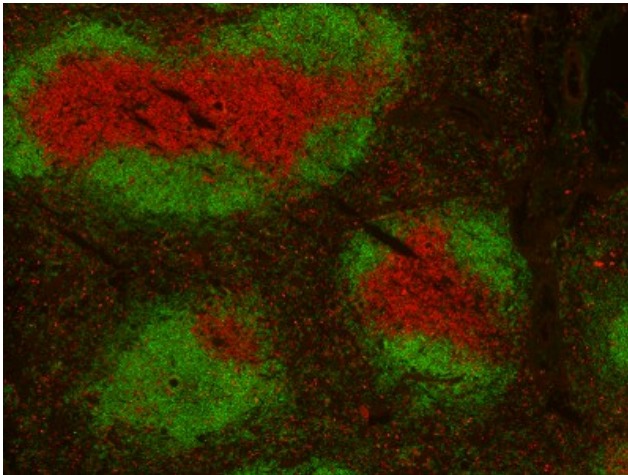
Product Data



C57BL/6 mouse splenocytes stained with purified 17A2, followed by anti-rat IgG FITC



C57BL/6 mouse frozen spleen section was fixed with 4% paraformaldehyde (PFA) for ten minutes at room temperature and blocked with 5% FBS for 30 minutes at room temperature. Then, the section was stained with 10 µg/mL of Purified CD3 (clone 17A2) and Alexa Fluor® 488 anti-mouse/human CD45R/B220 antibody (green) overnight at 4°C, followed by 2.5 µg/mL of Alexa Fluor® 594 anti-rat IgG2b (clone MRG2b-85) (red) for two hours at room temperature. The image was captured by 10X objective.



Fresh, frozen mouse spleen was stained with purified CD3 clone 17A2 conjugated and detected with a Cy3 CODEX™ oligonucleotide duplex (red). Samples were counterstained with B220 A647 (green). Data generated at Akoya Biosciences, Inc. using the CODEX™ technology.

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