

Biotin anti-mouse CD3 Antibody

Catalog# / Size	100243 / 50 µg 100244 / 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 and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	FC - Quality tested IHC-F - Verified
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 ≤0.125 µg per million cells in 100 µl volume. For immunohistochemistry, a concentration range of 5.0 - 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
Product Citations	1. Chappaz S, <i>et al.</i> 2021. <i>Cell Reports.</i> 36(3):109430. PubMed 2. Thierry GR, <i>et al.</i> 2018. <i>J Exp Med.</i> 215:2972. PubMed 3. Shao B, <i>et al.</i> 2018. <i>Mol Med Rep.</i> 18:920. PubMed 4. Barry KC, <i>et al.</i> 2018. <i>Nat Med.</i> 24:1178. PubMed 5. Blecher-Gonen R, <i>et al.</i> 2019. <i>Cell Syst.</i> 8:109. PubMed 6. Yu VWC <i>et al.</i> 2016. <i>Cell.</i> 167(5):1310-1322. PubMed 7. Zong L, <i>et al.</i> 2021. <i>NPJ Aging Mech Dis.</i> 7:25. PubMed 8. Joachim R, Suber F, and Kobzik L 2017. <i>Sci Rep.</i> . 10.1038/s41598-017-16743-1. PubMed 9. Zhao M, <i>et al.</i> 2019. <i>Cell Rep.</i> 26:652. PubMed 10. Dey A <i>et al.</i> 2019. <i>The EMBO journal.</i> 38(7) pii: e100293. PubMed 11. Niss K, <i>et al.</i> 2020. <i>Cell Reports.</i> 31(11):107763. PubMed 12. Wang Y, <i>et al.</i> 2021. <i>Signal Transduct Target Ther.</i> 6:409. PubMed 13. Shen Z, <i>et al.</i> 2021. <i>iScience.</i> 24:103014. PubMed 14. Yu VWC, <i>et al.</i> 2017. <i>Cell.</i> 168:944. PubMed

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RRID AB_2563946 (BioLegend Cat. No. 100243)
 AB_2563947 (BioLegend Cat. No. 100244)

Antigen Details

Structure	Ig 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

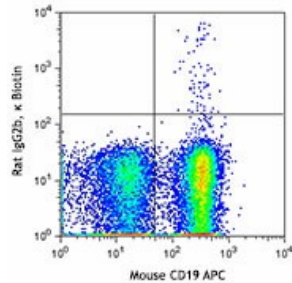
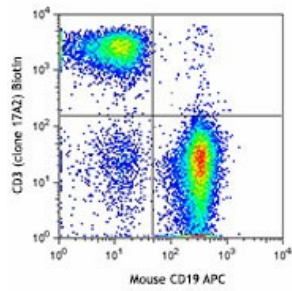
[Immunohistochemistry Protocol for Frozen Sections](#)

[Cell Surface Flow Cytometry Staining Protocol](#)

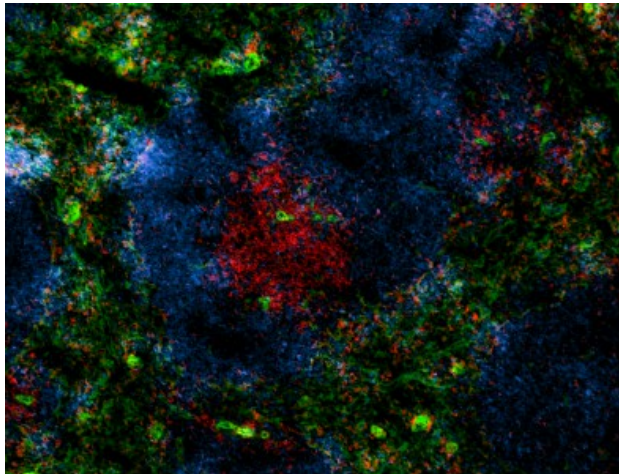
Other Formats

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 CD19 APC and biotinylated CD3 (clone 17A2) (top) or biotinylated rat IgG2b, κ isotype control (bottom), followed by SAV-PE.



C57BL/6 mouse frozen spleen section was fixed with 4% paraformaldehyde (PFA) for 10 minutes at room temperature and blocked with 5% FBS for 30 minutes at room temperature. Then the section was stained with 10 μ g/ml of biotin anti-mouse CD3 (clone 17A2), Alexa Fluor[®] 594 anti-mouse B220 (clone RA3-6B2) (blue) and Alexa Fluor[®] 488 anti-mouse CD29 (clone HM β 1-1) (green) overnight at 4 $^{\circ}$ C, followed by 2.5 μ g/ml of Spark YG[™] 570 Streptavidin (red) for 2 hours at room temperature. The image was captured by 10X objective.

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