

PerCP/Cyanine5.5 anti-human CD3 Antibody

Catalog# / Size	300327 / 25 tests 300328 / 100 tests
Clone	HIT3a
Regulatory Status	RUO
Workshop	V CD03.05
Other Names	T3, CD3ε
Isotype	Mouse IgG2a, κ
Description	CD3ε is a 20 kD chain of the CD3/T-cell receptor (TCR) complex which is composed of two CD3ε, one CD3γ, one CD3δ, one CD3ζ (CD247), and a T-cell receptor (α/β or γ/δ) heterodimer. It is found on all mature T lymphocytes, NK-T cells, and some thymocytes. CD3, also known as T3, is a member of the immunoglobulin superfamily that plays a role in antigen recognition, signal transduction, and T cell activation.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography, and conjugated with PerCP/Cyanine5.5 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. * PerCP/Cyanine5.5 has a maximum absorption of 482 nm and 564 nm and a maximum emission of 690 nm.
Excitation Laser	Blue Laser (488 nm)
Application Notes	Additional reported (for the relevant formats) applications include: immunohistochemical staining of acetone-fixed frozen sections, immunoprecipitation, and activation of T lymphocytes ⁴⁻⁷ . The HIT3a antibody is able to stimulate T cell activation. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 300314). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 300332) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).
Additional Product Notes	BioLegend is in the process of converting the name PerCP/Cy5.5 to PerCP/Cyanine5.5. The dye molecule remains the same, so you should expect the same quality and performance from our PerCP/Cyanine5.5 products. Contact Technical Service if you have any questions.
Application References	1. Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. 2. Knapp W. 1989. Leucocyte Typing IV. Oxford University Press New York. 3. Barclay N, <i>et al.</i> 1997. The Leucocyte Antigen Facts Book. Academic Press Inc. San Diego. 4. Sedelies KA, <i>et al.</i> 2004. <i>J. Biol. Chem.</i> 279:26581. (Activ) 5. Rivollier A, <i>et al.</i> 2004. <i>Blood</i> 104:4029. (Activ)
(PubMed link indicates BioLegend citation)	

6. Scharschmidt E, *et al.* 2004. *Mol. Cell Biol.* 24:3860. (Activ)
7. Smeltz RB. 2007. *J. Immunol.* 178:4786. (Activ)
8. Edgar CE, *et al.* 2015. *PLoS One.* 10:117614. [PubMed](#)

Product Citations

1. Parsons M, *et al.* 2010. *J Leukoc Biol.* 88:905. [PubMed](#)
2. Ivan Jelcic *et al.* 2018. *Cell.* 175(1):85-100 . [PubMed](#)
3. Li H, *et al.* 2022. *Cell Rep Med.* 3:100554. [PubMed](#)
4. Carbone ML, *et al.* 2022. *Sci Rep.* 12:5448. [PubMed](#)
5. Klemm F, *et al.* 2020. *Cell.* 181(7):1643-1660.e17. [PubMed](#)
6. Azizi E *et al.* 2018. *Cell.* 174(5):1293-1308 e36. [PubMed](#)
7. Fu B *et al.* 2017. *Immunity.* 47(6):1100-1113 . [PubMed](#)
8. Wang H, *et al.* 2022. *Front Immunol.* 13:852436. [PubMed](#)
9. Rodriguez-García A, *et al.* 2020. *Mol Ther.* 28:548. [PubMed](#)
10. Mashiko S, *et al.* 2015. *J Allergy Clin Immunol.* 136: 351-359. [PubMed](#)
11. Grier A, *et al.* 2016. *Mol Ther Nucleic Acids.* 5: e306. [PubMed](#)
12. Kobayashi Y, *et al.* 2020. *Int J Oncol.* 999:56. [PubMed](#)
13. Rölle A, *et al.* 2018. *Cell Rep.* 24:1967. [PubMed](#)
14. Zirngibl F, *et al.* 2021. *J Immunother Cancer.* 9:. [PubMed](#)
15. Cai D, *et al.* 2021. *Front Mol Biosci.* 8:686803. [PubMed](#)
16. Walk J, *et al.* 2019. *Nat Commun.* 10:874. [PubMed](#)
17. Subedi N, *et al.* 2021. *Sci Rep.* 11:17084. [PubMed](#)
18. Ciaglia E, *et al.* 2021. *J Gerontol A Biol Sci Med Sci.* 76:1775. [PubMed](#)
19. Mender I, *et al.* 2020. *Cancer Cell.* 38(3):400-411.e6. [PubMed](#)
20. Cornelius C *et al.* 2016. *EBioMedicine.* 11:58-67 . [PubMed](#)
21. Shen X, *et al.* 2021. *Front Immunol.* 12:710750. [PubMed](#)
22. Liu Y, *et al.* 2017. *Oncogene.* 10.1038/onc.2017.209. [PubMed](#)
23. Draganov DD, *et al.* 2019. *J Transl Med.* 17:100. [PubMed](#)
24. Zhang X, *et al.* 2021. *Front Immunol.* 12:602492. [PubMed](#)
25. Edgar C, *et al.* 2015. *PLoS One.* 10:117614. [PubMed](#)
26. Santoni de Sio FR, *et al.* 2018. *J Allergy Clin Immunol.* 142:1909. [PubMed](#)
27. Paulikat AD, *et al.* 2022. *J Innate Immun.* . [PubMed](#)
28. Zhu YP *et al.* 2018. *Cell reports.* 24(9):2329-2341 . [PubMed](#)
29. Wang F, *et al.* 2021. *Genomics Proteomics Bioinformatics.* 19:208. [PubMed](#)
30. Maas RR, *et al.* 2021. *Nat Protoc.* 16:4692. [PubMed](#)
31. Clayton KL, *et al.* 2021. *Cell Host Microbe.* 29(3):435-447.e9. [PubMed](#)
32. Nakamura K, *et al.* 2018. *Cancer Cell.* 33:634. [PubMed](#)
33. Xian S, *et al.* 2021. *EMBO Rep.* 22:e52509. [PubMed](#)
34. Serr I, *et al.* 2016. *Nat Commun.* 7:10991. [PubMed](#)
35. Li M, *et al.* 2020. *Nat Commun.* 4051:11. [PubMed](#)
36. Agelidis A, *et al.* 2017. *Cell Rep.* 10.1016/j.celrep.2017.06.041. [PubMed](#)

RRID AB_1575010 (BioLegend Cat. No. 300327)
 AB_1575008 (BioLegend Cat. No. 300328)

Antigen Details

Structure	Ig superfamily, with the subunits of CD3 γ , CD3 δ , CD3 ζ (CD247) and TCR (α/β or γ/δ) forms CD3/TCR complex, 20 kD
Distribution	Mature T and NK-T cells, thymocyte differentiation
Function	Antigen recognition, signal transduction, T cell activation
Ligand/Receptor	Peptide antigen bound to MHC
Cell Type	NKT cells, T cells, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules, TCRs
Antigen References	<ol style="list-style-type: none"> 1. Barclay N, <i>et al.</i> 1993. <i>The Leucocyte FactsBook.</i> Academic Press. San Diego. 2. Beverly P, <i>et al.</i> 1981. <i>Eur. J. Immunol.</i> 11:329. 3. Lanier L, <i>et al.</i> 1986. <i>J. Immunol.</i> 137:2501-2507.
Gene ID	916

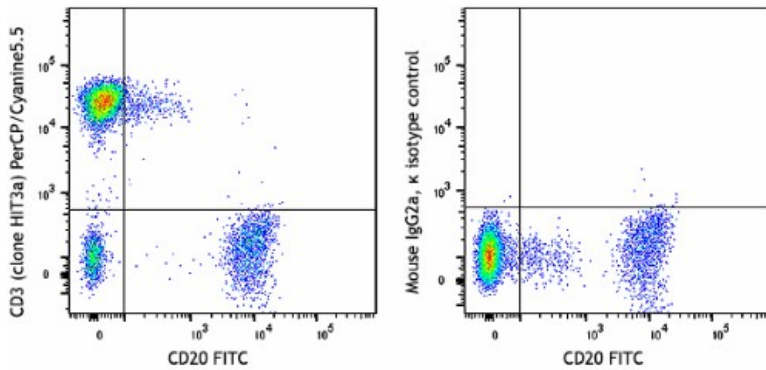
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD3, Biotin anti-human CD3, FITC anti-human CD3, PE anti-human CD3, PE/Cyanine5 anti-human CD3, Purified anti-human CD3, APC/Cyanine7 anti-human CD3, PE/Cyanine7 anti-human CD3, Alexa Fluor® 488 anti-human CD3, Alexa Fluor® 647 anti-human CD3, Alexa Fluor® 700 anti-human CD3, PerCP anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, Pacific Blue™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, PE/Dazzle™ 594 anti-human CD3

Product Data



Human peripheral blood lymphocytes were surface stained with CD20 FITC and CD3 (clone HIT3a) PerCP/Cyanine5.5 (left), or Mouse IgG2a, κ PerCP/Cyanine5.5 isotype control (right).

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