

FITC anti-human CD3 Antibody

Catalog# / Size	300305 / 25 tests 300306 / 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 FITC 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.
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).
Application References (PubMed link indicates BioLegend citation)	- Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. - Knapp W. 1989. Leucocyte Typing IV. Oxford University Press New York. - Barclay N, <i>et al.</i> 1997. The Leucocyte Antigen Facts Book. Academic Press Inc. San Diego. - Sedelies KA, <i>et al.</i> 2004. <i>J. Biol. Chem.</i> 279:26581. (Activ) - Rivollier A, <i>et al.</i> 2004. <i>Blood</i> 104:4029. (Activ) - Scharschmidt E, <i>et al.</i> 2004. <i>Mol. Cell Biol.</i> 24:3860. (Activ) - Smeltz RB. 2007. <i>J. Immunol.</i> 178:4786. (Activ)

Product Citations	- Budde H, <i>et al.</i> 2017. <i>Ann Hematol.</i> 10.1007/s00277-017-2999-5. PubMed - Gladkikh A, <i>et al.</i> 2017. <i>Cancer Med.</i> . 10.1002/cam4.1257. PubMed - Idorn M, <i>et al.</i> 2018. <i>Oncoimmunology.</i> 7:e1412029. PubMed
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4. Warthan MD, *et al.* 2018. Biol Reprod. 98:309. [PubMed](#)
5. Liu Y, *et al.* 2018. Cancer Cell. 33:480. [PubMed](#)
6. Liu B, *et al.* 2019. Mol Med Rep. 20:2823. [PubMed](#)
7. Washburn ML, *et al.* 2019. J Immunol. 203:1897. [PubMed](#)
8. Janela B, *et al.* 2019. Immunity. 50:1069. [PubMed](#)
9. Jiang Q *et al.* 2019. Cancer cell. 35(1):81-94. [PubMed](#)
10. Linedale R, *et al.* 2017. PLoS One. 12:e0175755. [PubMed](#)
11. Motwani MP, *et al.* 2018. JCI Insight. 3:e94463. [PubMed](#)
12. Bourges C, *et al.* 2020. EMBO Mol Med. 12:e12112. [PubMed](#)
13. Foote JR, *et al.* 2019. Front Immunol. 10:188. [PubMed](#)
14. McGowan J, *et al.* 2019. Front Immunol. 10:1553. [PubMed](#)
15. Forsberg EMV, *et al.* 2019. Cancer Res. 79:899. [PubMed](#)
16. Bu S, *et al.* 2019. Int J Oncol. 55:179. [PubMed](#)
17. Stuart T, *et al.* 2019. Cell. 177:1888. [PubMed](#)
18. Huang B, *et al.* 2020. Cell. 179(5):1160-1176.e24. [PubMed](#)
19. Karlsson J, *et al.* 2020. Nat Commun. 11:773611111. [PubMed](#)
20. Urlaub D, *et al.* 2019. Arthritis Res Ther. 21:e1067361111. [PubMed](#)
21. Parameswaran R, *et al.* 2016. Nat Commun. 7: 11154. [PubMed](#)
22. Abolhassani H, *et al.* 2017. J Exp Med. 214(1):91-106. [PubMed](#)
23. Poran A, *et al.* 2020. Cell Reports Medicine. 1(8):100141. [PubMed](#)
24. Dinh HQ, *et al.* 2020. Immunity. 53(2):319-334.e6. [PubMed](#)
25. Ott PA, *et al.* 2020. Cell. 183(2):347-362.e24. [PubMed](#)
26. Zhou Y, *et al.* 2020. Cancer Cell. 38(6):818-828.e5. [PubMed](#)
27. Mondala PK, *et al.* 2021. Cell Stem Cell. 28(4):623-636.e9. [PubMed](#)
28. Jiang Q, *et al.* 2021. Cell Reports. 34(4):108670. [PubMed](#)
29. Sutton HJ, *et al.* 2021. Cell Reports. 34(6):108684. [PubMed](#)

RRID AB_314041 (BioLegend Cat. No. 300305)
 AB_314042 (BioLegend Cat. No. 300306)

Antigen Details

Structure	Ig superfamily, with the subunits of CD3γ, CD3δ, CD3ζ (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	T cells, NKT cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules, TCRs
Antigen References	1. Barclay N, <i>et al.</i> 1993. The Leucocyte FactsBook. Academic Press. San Diego. 2. Beverly P, <i>et al.</i> 1981. Eur. J. Immunol. 11:329. 3. Lanier L, <i>et al.</i> 1986. J. Immunol. 137:2501-2507.
Gene ID	916

Related Protocols

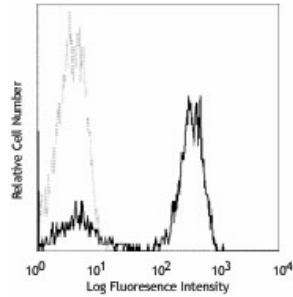
[Cell Surface Flow Cytometry Staining Protocol](#)

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
stained with HIT3a FITC



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