

Pacific Blue™ anti-human CD3 Antibody

Catalog# / Size	300329 / 25 tests 300330 / 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 Pacific Blue™ 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	<p>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 ≤ 2.0 µg per 10⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Violet Laser (405 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	<ol style="list-style-type: none"> 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)
(PubMed link indicates BioLegend citation)	

5. Rivollier A, *et al.* 2004. *Blood* 104:4029. (Activ)
6. Scharschmidt E, *et al.* 2004. *Mol. Cell Biol.* 24:3860. (Activ)
7. Smeltz RB. 2007. *J. Immunol.* 178:4786. (Activ)

Product Citations

1. Kim C, *et al.* 2018. *Cell Rep.* 25:2148. [PubMed](#)
2. Wang Z, *et al.* 2021. *Cell Mol Immunol.* 18:2188. [PubMed](#)
3. Bellini N, *et al.* 2022. *iScience.* 25:105234. [PubMed](#)
4. Iannetta M, *et al.* 2016. *PLoS One.* 11: 0160277. [PubMed](#)
5. Ramos-Murillo AI, *et al.* 2020. *Pharmaceutics.* 12:00. [PubMed](#)
6. Dockry E, *et al.* 2018. *Oncoimmunology.* 7:e1428156. [PubMed](#)
7. Congras A, *et al.* 2020. *J Clin Invest.* 130:6395. [PubMed](#)
8. Smith SA, *et al.* 2019. *Front Immunol.* 9:3163. [PubMed](#)
9. Vabret N, *et al.* 2022. *iScience.* 25:104599. [PubMed](#)
10. Li N, *et al.* 2020. *Oncoimmunology.* 9:1824643. [PubMed](#)
11. Huynh L, *et al.* 2016. *Sci Rep.* 6:31959. [PubMed](#)
12. Roerden M, *et al.* 2021. *Cancers.* 13(11):. [PubMed](#)
13. Inui M, *et al.* 2015. *Int Immunol.* 27: 345 - 355. [PubMed](#)
14. Li M, *et al.* 2020. *Nat Commun.* 4051:11. [PubMed](#)
15. Minn I, *et al.* 2019. *Sci Adv.* 5:eaaw5096. [PubMed](#)
16. Bhargavan B, *et al.* 2021. *Mol Neurodegener.* 16:78. [PubMed](#)

RRID

AB_10552893 (BioLegend Cat. No. 300329)
 AB_10551436 (BioLegend Cat. No. 300330)

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	T cells, NKT 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

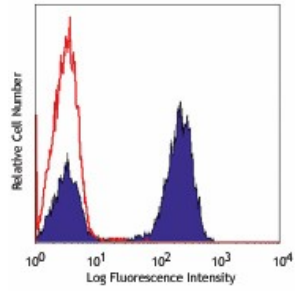
[Cell Surface Flow Cytometry Staining Protocol](#)

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
stained with HIT3a Pacific Blue™



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