

PerCP anti-human CD3 Antibody

Catalog# / Size	300325 / 25 tests 300326 / 100 tests
Clone	HIT3a
Regulatory Status	RUO
Workshop	V CD03.05
Other Names	T3, CD3 ϵ
Isotype	Mouse IgG2a, κ
Description	CD3 ϵ is a 20 kD chain of the CD3/T-cell receptor (TCR) complex which is composed of two CD3 ϵ , one CD3 γ , one CD3 δ , one CD3 ζ (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 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
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 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood. * PerCP has a maximum absorption of 482 nm and a maximum emission of 675 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/ μ g, Azide-Free, 0.2 μ m 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/ μ g).

Application References

(PubMed link indicates BioLegend citation)

1. Schlossman S, *et al.* 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, *et al.* 1997. The Leucocyte Antigen Facts Book. Academic Press Inc. San Diego.
4. Sedelies KA, *et al.* 2004. *J. Biol. Chem.* 279:26581. (Activ)
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. Zheng G, *et al.* 2021. *Signal Transduct Target Ther.* 6:236. [PubMed](#)
2. Zhang H, *et al.* 2021. *Front Immunol.* 12:644520. [PubMed](#)
3. Vondra S, *et al.* 2023. *Cell Rep.* 42:111977. [PubMed](#)
4. Schmitz T, *et al.* 2021. *J Reprod Immunol.* 148:103424. [PubMed](#)
5. Lu Y, *et al.* 2019. *Anticancer Res.* 39:5911. [PubMed](#)
6. DeKosky B, *et al.* 2016. *Proc Natl Acad Sci U S A.* 113: 2636 - 2645. [PubMed](#)
7. Sekhri P, *et al.* 2022. *Cancers (Basel).* 14:. [PubMed](#)
8. Arora JK, *et al.* 2022. *iScience.* 25:104034. [PubMed](#)
9. Cheng B, *et al.* 2022. *Cancer Commun (Lond).* 42:17. [PubMed](#)
10. Yang L, *et al.* 2020. *Genes Dis.* 7:128. [PubMed](#)
11. Chen Z, *et al.* 2021. *Dis Markers.* 2021:5838582. [PubMed](#)
12. Zhang X, *et al.* 2021. *Front Immunol.* 12:602492. [PubMed](#)

RRID

AB_2616609 (BioLegend Cat. No. 300325)
AB_2616610 (BioLegend Cat. No. 300326)

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, Thymocytes, 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. The Leucocyte FactsBook. 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

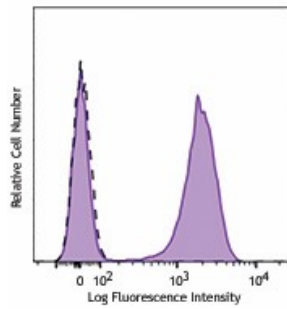
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

PE anti-human CD3, Purified anti-human CD3, PE/Cyanine5 anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, APC anti-human CD3, Biotin anti-human CD3, FITC anti-human CD3, Spark UV™ 387 anti-human CD3, TotalSeq™-C1290 anti-human CD3, Brilliant Violet 605™ anti-human CD3, TotalSeq™-B1290 anti-human CD3, PE/Dazzle™ 594 anti-human CD3, APC/Cyanine7 anti-human CD3, Brilliant Violet 510™ anti-human CD3, Alexa Fluor® 647 anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, Pacific Blue™ anti-human CD3, Spark Red™ 718 anti-human CD3, PE/Cyanine7 anti-human CD3, Alexa Fluor® 488 anti-human CD3, Alexa Fluor® 700 anti-human CD3, PerCP anti-human CD3, Spark YG™ 581 anti-human CD3 (Flexi-Fluor™)

Product Data



Human, lysed whole blood was stained with CD3 (clone HIT3a) PerCP (filled histogram) or Mouse IgG2a, κ PerCP isotype control (open histogram).

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