

## PE anti-human CD3 Antibody

<b>Catalog# / Size</b>	300307 / 25 tests 300308 / 100 tests
<b>Clone</b>	HIT3a
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	V CD03.05
<b>Other Names</b>	T3, CD3 $\epsilon$
<b>Isotype</b>	Mouse IgG2a, $\kappa$
<b>Description</b>	CD3 $\epsilon$ is a 20 kD chain of the CD3/T-cell receptor (TCR) complex which is composed of two CD3 $\epsilon$ , one CD3 $\gamma$ , one CD3 $\delta$ , one CD3 $\zeta$ (CD247), and a T-cell receptor ( $\alpha/\beta$ or $\gamma/\delta$ ) 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

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu$ l per million cells in 100 $\mu$ l staining volume or 5 $\mu$ l per 100 $\mu$ l of whole blood.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Additional reported (for the relevant formats) applications include: immunohistochemical staining of acetone-fixed frozen sections, immunoprecipitation, and activation of T lymphocytes <sup>4-7</sup> . The HIT3a antibody is able to stimulate T cell activation. The LEAF™ purified antibody (Endotoxin <0.1 EU/ $\mu$ g, Azide-Free, 0.2 $\mu$ 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/ $\mu$ 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. Im NG, *et al.* 2022. *Cancer Immunol Res.* 10:1055. [PubMed](#)
2. Yang Y, *et al.* 2023. *Front Immunol.* 14:1033497. [PubMed](#)
3. Wu Y, *et al.* 2021. *Cancer Gene Ther.* Online ahead of print. [PubMed](#)
4. Kwee BJ, *et al.* 2021. *Proc Natl Acad Sci U S A.* 118: . [PubMed](#)
5. Li Y, *et al.* 2022. *J Med Virol.* 94:3998. [PubMed](#)
6. Busek M, *et al.* 2023. *Lab Chip.* 23:591. [PubMed](#)
7. Pan R, *et al.* 2022. *Cell.* 185:1521. [PubMed](#)
8. Wang H, *et al.* 2020. *J Exp Clin Cancer Res.* 39:29. [PubMed](#)
9. Lin GL, *et al.* 2018. *Acta Neuropathol Commun.* 9:617. [PubMed](#)
10. Galindo-Albarrán A, *et al.* 2016. *Cell Rep.* 17:2151-2160. [PubMed](#)
11. Rochat MA, *et al.* 2018. *Virol J.* 15:191. [PubMed](#)
12. Bardet M, *et al.* 2018. *Immunol Cell Biol.* 96:81. [PubMed](#)

## RRID

AB\_314043 (BioLegend Cat. No. 300307)  
AB\_314044 (BioLegend Cat. No. 300308)

## Antigen Details

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

## Related Protocols

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

## Other Formats

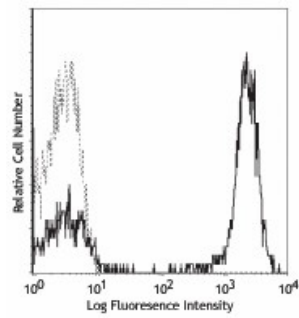
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PE anti-human CD3, Purified anti-human CD3, PE/Cyanine5 anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, APC anti-human CD3, Biotin anti-human CD3, FITC anti-human CD3, Spark UV™ 387 anti-human CD3, TotalSeq™-C1290 anti-human CD3, Brilliant Violet 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

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Human peripheral blood lymphocytes  
stained with HIT3a PE



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