

## GMP Pacific Blue<sup>™</sup> anti-human CD3 Antibody

<b>Catalog# / Size</b>	260070 / 100 tests
<b>Clone</b>	UCHT1
<b>Workshop</b>	III 471
<b>Other Names</b>	T3, CD3 $\epsilon$
<b>Isotype</b>	Mouse IgG1, $\kappa$
<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 cells, NKT 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

<b>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, 0.2% (w/v) BSA (origin USA) and a stabilizer.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Pacific Blue <sup>™</sup> under optimal conditions.
<b>Concentration</b>	200 $\mu\text{g}/\text{mL}$
<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>	<p>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 <math>\mu\text{L}</math> per million cells in 100 <math>\mu\text{L}</math> staining volume or 5 <math>\mu\text{L}</math> per 100 <math>\mu\text{L}</math> of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue<sup>™</sup> has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue<sup>™</sup> conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections <sup>4,6,7</sup> and formalin-fixed paraffin-embedded sections <sup>11</sup> , immunoprecipitation <sup>1</sup> , activation of T cells <sup>2,3,5</sup> , and Western blotting <sup>9</sup> . The LEAF <sup>™</sup> purified antibody (Endotoxin < 0.1 EU/ $\mu\text{g}$ , Azide-Free, 0.2 $\mu\text{m}$ filtered) is recommended for functional assays (Cat. No. 300413, 300414, and 300432). For highly sensitive assays, we recommend Ultra-LEAF <sup>™</sup> purified antibody (Cat. No. 300437, 300438, 300465, 300466, 300473, 300474) with a lower endotoxin limit than standard LEAF <sup>™</sup> purified antibodies (Endotoxin < 0.01 EU/ $\mu\text{g}$ ).
<b>Application References</b>	<ol style="list-style-type: none"> <li>Salmeron A, <i>et al.</i> 1991. <i>J. Immunol.</i> 147:3047. (IP)</li> <li>Graves J, <i>et al.</i> 1991. <i>J. Immunol.</i> 146:2102. (Activ)</li> <li>Lafont V, <i>et al.</i> 2000. <i>J. Biol. Chem.</i> 275:19282. (Activ)</li> <li>Ryschich E, <i>et al.</i> 2003. <i>Tissue Antigens</i> 62:48. (IHC)</li> <li>Thompson AG, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:1671. (Activ)</li> <li>Sakkas LI, <i>et al.</i> 1998. <i>Clin. Diagn. Lab. Immunol.</i> 5:430. (IHC)</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

7. Mack CL, et al. 2004. *Pediatr. Res.* 56:79. (IHC)
8. Thakral D, et al. 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
9. Van Dongen JJM, et al. 1988. *Blood* 71:603. (WB)
10. Yoshino N, et al. 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
11. Pollard, K. et al. 1987. *J. Histochem. Cytochem.* 35:1329. (IHC)
12. Luckashenak N, et al. 2013. *J. Immunol.* 190:27. [PubMed](#)
13. Laurent AJ, et al. 2014. *PLoS One.* 9:103683. [PubMed](#)
14. Li J, et al. 2015. *Cancer Res.* 75:508. [PubMed](#)
15. Stoeckius M, et al. 2017. *Nat. Methods.* 14:865-868. (PG)

#### Disclaimer

**GMP RUO Flow Cytometry Antibodies.** BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include:

- Batch-to-batch consistency
- Material traceability
- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

## 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, Innate Immunity
<b>Molecular Family</b>	CD Molecules, TCRs
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Barclay N, et al. 1993. <i>The Leucocyte FactsBook.</i> Academic Press. San Diego.</li> <li>2. Beverly P, et al. 1981. <i>Eur J Immunol.</i> 11:329-34.</li> <li>3. Lanier L, et al. 1986. <i>J Immunol.</i> 137:2501-2507.</li> </ol>
<b>Gene ID</b>	<a href="#">916</a>

## Related Protocols

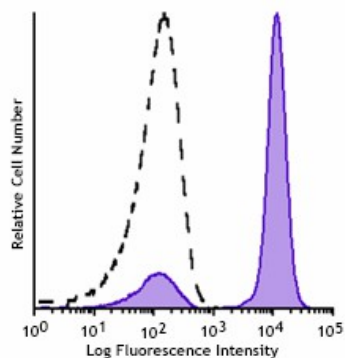
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[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

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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, Alexa Fluor® 647 anti-human CD3, Alexa Fluor® 488 anti-human CD3, Pacific Blue™ anti-human CD3, PE/Cyanine7 anti-human CD3, Alexa Fluor® 700 anti-human CD3, APC/Cyanine7 anti-human CD3, PerCP anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, Brilliant Violet 421™ anti-human CD3, Brilliant Violet 570™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, Purified anti-human CD3 (Maxpar® Ready), Alexa Fluor® 594 anti-human CD3, PE/Dazzle™ 594 anti-human CD3, Brilliant Violet 510™ anti-human CD3, Brilliant Violet 605™ anti-human CD3, Brilliant Violet 711™ anti-human CD3, Brilliant Violet 650™ anti-human CD3, APC/Fire™ 750 anti-human CD3, Brilliant Violet 785™ anti-human CD3, TotalSeq™-A0034 anti-human CD3, TotalSeq™-B0034 anti-human CD3, TotalSeq™-C0034 anti-human CD3, KIRAVIA Blue 520™ anti-human CD3, Spark Violet™ 538 anti-human CD3 Antibody, TotalSeq™-D0034 anti-human CD3, Spark Blue™ 574 anti-human CD3 Antibody



Typical results from human peripheral blood lymphocytes stained either with clone UCHT1 Pacific Blue™ used at 5 µL/test (filled histogram) or with an isotype control (open histogram).

**Symbols Glossary\***

Symbol	Meaning	Symbol Title	Symbol No.	Symbol	Meaning	Symbol Title	Symbol No.
	Catalog number	Catalogue number	5.1.6		Indicates the need for the user to consult the instructions for use.	Consult instructions for use	5.4.3
	Indicates the temperature limits to which the medical device can be safely exposed.	Temperature limit	5.3.7		Indicates a medical device that needs protection from light sources.	Keep away from sunlight	5.3.2
	Indicates the upper limit of temperature to which the medical device can be safely exposed.	Upper limit of temperature	5.3.6		Indicates the date after which the medical device is not to be used.	Use-by date	5.1.4
	Indicates the medical device manufacturer.	Manufacturer	5.1.1		Indicates the authorized representative in the European Community.	Authorized representative in the European Community	5.1.2
	Indicates the manufacturer's batch code so that the batch or lot can be identified.	Batch code	5.1.5		Indicates a medical device that is intended to be used as an in vitro diagnostic medical device.	<i>In vitro</i> diagnostic medical device	5.5.1

\* Symbol information is from EN ISO 15223-1:2016 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements

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