

## Purified anti-human CD3 (Maxpar<sup>®</sup> Ready) Antibody

|                          |   |
|--------------------------|---|
| <b>Catalog# / Size</b>   | 300443 / 100 µg   |
| <b>Clone</b>             | UCHT1   |
| <b>Regulatory Status</b> | RUO   |
| <b>Workshop</b>          | III 471   |
| <b>Other Names</b>       | T3, CD3ε  |
| <b>Isotype</b>           | Mouse IgG1, κ   |
| <b>Description</b>       | 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 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>Verified Reactivity</b>                        | Human   |
| <b>Reported Reactivity</b>                        | Chimpanzee  |
| <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 EDTA.  |
| <b>Preparation</b>                                | The antibody was purified by affinity chromatography.   |
| <b>Concentration</b>                              | 1.0 mg/ml   |
| <b>Storage &amp; Handling</b>                     | The antibody solution should be stored undiluted between 2°C and 8°C.   |
| <b>Application</b>                                | <a href="#">FC - Quality tested</a><br><a href="#">CyTOF<sup>®</sup>, PG - Verified</a>   |
| <b>Recommended Usage</b>                          | This product is suitable for use with the <a href="#">Maxpar<sup>®</sup> Metal Labeling Kits</a> . For metal labeling using Maxpar <sup>®</sup> Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar <sup>®</sup> Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar <sup>®</sup> User Guide when conjugating Maxpar <sup>®</sup> Ready antibodies.  |
| <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> , Western blotting <sup>9</sup> , and spatial biology (IBEX) <sup>16,17</sup> . The LEAF™ purified antibody (Endotoxin < 0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 300413, 300414, and 300432). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 300437, 300438, 300465, 300466, 300473, 300474) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin < 0.01 EU/µg). |
| <b>Additional Product Notes</b>                   | Maxpar <sup>®</sup> is a registered trademark of Standard BioTools Inc.   |
| <b>Application References</b>                     | 1. Salmeron A, <i>et al.</i> 1991. <i>J. Immunol.</i> 147:3047. (IP)<br>2. Graves J, <i>et al.</i> 1991. <i>J. Immunol.</i> 146:2102. (Activ)<br>3. Lafont V, <i>et al.</i> 2000. <i>J. Biol. Chem.</i> 275:19282. (Activ)<br>4. Ryschich E, <i>et al.</i> 2003. <i>Tissue Antigens</i> 62:48. (IHC)<br>5. Thompson AG, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:1671. (Activ)<br>6. Sakkas LI, <i>et al.</i> 1998. <i>Clin. Diagn. Lab. Immunol.</i> 5:430. (IHC)<br>7. Mack CL, <i>et al.</i> 2004. <i>Pediatr. Res.</i> 56:79. (IHC)<br>8. Thakral D, <i>et al.</i> 2008. <i>J. Immunol.</i> 180:7431. (FC) <a href="#">PubMed</a><br>9. Van Dongen JJM, <i>et al.</i> 1988. <i>Blood</i> 71:603. (WB)   |
| <b>(PubMed link indicates BioLegend citation)</b> |   |

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)
16. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
17. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

#### Product Citations

1. Alcántara-Hernández M *et al.* 2017. *Immunity.* 47(6):1037-1050. [PubMed](#)
2. Jordan S, *et al.* 2020. *Cell.* 178(5):1102-1114.e17. [PubMed](#)
3. Stras SF, *et al.* 2020. *Developmental Cell.* 51(3):357-373.e5. [PubMed](#)
4. Schulte-Schrepping J, *et al.* 2020. *Cell.* 182(6):1419-1440. [PubMed](#)
5. Leykle R, *et al.* 2020. *Cell Rep.* 32:108180. [PubMed](#)
6. Thrash EM, *et al.* 2020. *STAR Protoc.* 1:100055. [PubMed](#)
7. Dinh HQ, *et al.* 2020. *Immunity.* 53(2):319-334.e6. [PubMed](#)

RRID AB\_2562808 (BioLegend Cat. No. 300443)

## Antigen Details

|                           |   |
|---------------------------|---|
| <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, <i>et al.</i> 1993. <i>The Leucocyte FactsBook.</i> 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>   |

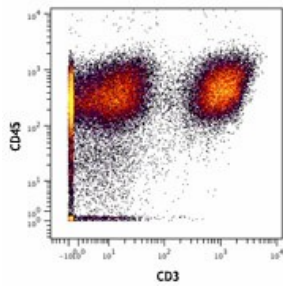
## Related Protocols

[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, 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, GMP Pacific Blue™ anti-human CD3

## Product Data



Human PBMCs stained with <sup>154</sup>Sm-anti-CD45 (HI30) and <sup>170</sup>Er-anti-CD3 (UCHT1). Data provided by DVS Sciences.

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587