

## TotalSeq™-B0034 anti-human CD3 Antibody

<b>Catalog# / Size</b>	300477 / 10 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>Barcode Sequence</b>	CTCATTGTAACTCCT
<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

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<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 1 mM EDTA.
<b>Preparation</b>	The antibody was purified by chromatography and conjugated with TotalSeq™-B oligomer under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">PG - 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> and the oligomer sequence is confirmed by sequencing. TotalSeq™-B antibodies are compatible with 10x Genomics Single Cell Gene Expression <a href="#">Solutions</a>.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
<b>Application Notes</b>	<p>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 &lt; 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 &lt; 0.01 EU/µg).</p>

**Additional Product Notes** TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit [biolegend.com/totalseq](https://biolegend.com/totalseq).

The barcode flanking sequences are GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNNN (PCR handle), and NNNNNNNNGCTTTAAGGCCGGTCCTAGC\*A\*A (capture sequence). N represents either randomly selected A, C, G, or T, and \* indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

## Application References

(PubMed link indicates BioLegend citation)

1. Salmeron A, *et al.* 1991. *J. Immunol.* 147:3047. (IP)
2. Graves J, *et al.* 1991. *J. Immunol.* 146:2102. (Activ)
3. Lafont V, *et al.* 2000. *J. Biol. Chem.* 275:19282. (Activ)
4. Ryschich E, *et al.* 2003. *Tissue Antigens* 62:48. (IHC)
5. Thompson AG, *et al.* 2004. *J. Immunol.* 173:1671. (Activ)
6. Sakkas LI, *et al.* 1998. *Clin. Diagn. Lab. Immunol.* 5:430. (IHC)
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)
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. Kumar P, *et al.* 2022. *Nat Neurosci.* 25:956. [PubMed](#)

## RRID

AB\_2800722 (BioLegend Cat. No. 300477)

## Antigen Details

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<b>Structure</b>	Ig superfamily, with the subunits of CD3γ, CD3δ, CD3ζ (CD247) and TCR (α/β or γ/δ) 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

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[TotalSeq™-B or -C with 10x Feature Barcoding Technology](#)

## 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, GMP Pacific Blue™ anti-human CD3, GMP PE anti-human CD3, GMP PE/Dazzle™ 594 anti-human CD3

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