

## GMP Ultra-LEAF™ Biotin anti-human CD3 SF Antibody

<b>Catalog# / Size</b>	317357 / 100 µg 317358 / 1 mg
<b>Clone</b>	OKT3
<b>Other Names</b>	T3, CD3ε
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	<p>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 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.</p> <p>GMP Ultra-LEAF™ Biotin anti-human CD3 SF Antibody was GMP manufactured under serum-free conditions including serumfree hybridoma cell culture, without additional animal or humanderived materials or preservatives. This antibody contains ultra-low levels of endotoxin (&lt;0.01EU/µg of protein), is filtered through a 0.1 µm membrane, and is tested negative for mycoplasma and microbial growths.</p> <p>GMP Ultra-LEAF™ Biotin anti-human CD3 SF Antibody is for research and further ex vivo bioprocessing use only.</p>

### Product Details

<b>Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	0.1 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is < 0.01 EU/µg of the protein (< 0.001 ng/µg of the protein) as determined by the LAL test.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) 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. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<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 ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	<p>GMP Ultra-LEAF™ Biotin anti-human CD3 SF Antibody (Endotoxin &lt; 0.01 EU/µg, Azide-Free, 0.1 µm filtered) is recommended for highly sensitive assays. The antibody was GMP manufactured under serum-free conditions including serum-free hybridoma cell culture, without additional animal or human-derived materials or preservatives. This antibody is intended for flow cytometry and for research or further ex vivo bioprocessing use only.</p> <p>The OKT3 monoclonal antibody reacts with an epitope on the epsilon-subunit within the human CD3 complex. Clone OKT3 can block the binding of clones SK7 and UCHT1<sup>4</sup>. The OKT3 antibody is able to induce T cell activation.</p> <p>Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections and activation of T cells.</p>
<b>Additional Product Notes</b>	For plate coating protocols, Biotin anti-human CD3 antibody (Cat. No. 317357/317358) can be used at 1 µg/mL in PBS in combination with 1 µg/mL of Biotin anti-human CD28 antibody (Cat. No. 302978) to efficiently activate T cells. Plates should be coated for 2 hours in a tissue culture incubator or overnight at 4°C. For soluble antibody activation protocols, we recommend 10 µg/mL of anti-human CD3 (Cat. No. 317357/317358) antibody and 5 µg/mL of anti-human CD28 antibody (Cat. No. 302978).
<b>Disclaimer</b>	<b>GMP Ultra-LEAF™ antibodies.</b> BioLegend GMP Ultra-LEAF™ antibodies are manufactured in a

dedicated GMP facility and compliant with ISO 13485:2016. For research or *ex vivo* cell processing use. 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

BioLegend GMP Ultra-LEAF™ antibodies are manufactured and tested in accordance with USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and Ph. Eur. Chapter 5.2.12

## Antigen Details

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<b>Structure</b>	Ig superfamily, the subunits CD3 $\gamma$ , CD3 $\delta$ , CD3 $\zeta$ (CD247) and TCR ( $\alpha/\beta$ or $\gamma/\delta$ ) form the CD3/TCR complex, 20 k
<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
<b>Antigen References</b>	Barclay N, <i>et al.</i> 1993. The Leucocyte FactsBook. Academic Press. San Diego. Beverly P, <i>et al.</i> 1981. <i>Eur. J. Immunol.</i> 11:329. Lanier L, <i>et al.</i> 1986. <i>J. Immunol.</i> 137:2501.
<b>Gene ID</b>	<a href="#">916</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

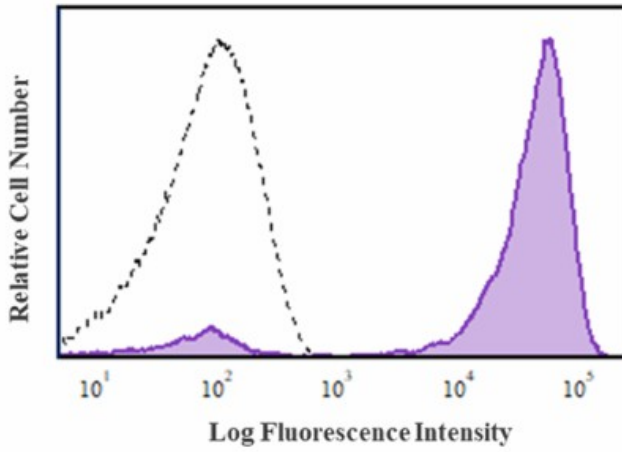
## Other Formats

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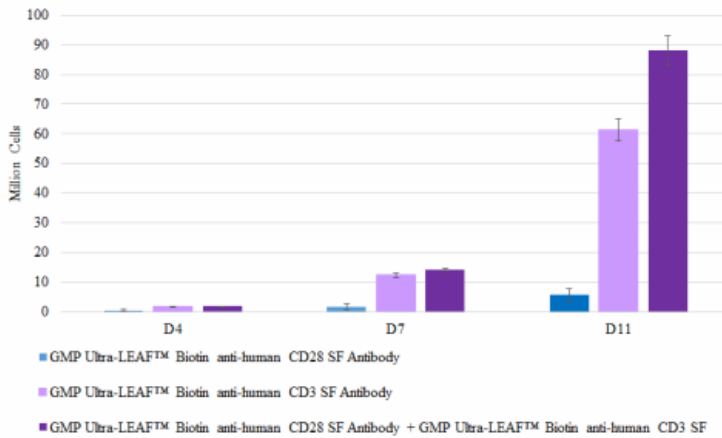
Purified anti-human CD3, FITC anti-human CD3, PE anti-human CD3, Alexa Fluor® 488 anti-human CD3, Alexa Fluor® 647 anti-human CD3, Pacific Blue™ anti-human CD3, APC anti-human CD3, Biotin anti-human CD3, Brilliant Violet 605™ anti-human CD3, Brilliant Violet 650™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, Brilliant Violet 711™ anti-human CD3, Brilliant Violet 785™ anti-human CD3, Brilliant Violet 510™ anti-human CD3, PE/Cyanine7 anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, PerCP anti-human CD3, Alexa Fluor® 700 anti-human CD3, APC/Cyanine7 anti-human CD3, Brilliant Violet 421™ anti-human CD3, PE/Dazzle™ 594 anti-human CD3, APC/Fire™ 750 anti-human CD3, GMP Ultra-LEAF™ Purified anti-human CD3 SF, PE/Cyanine5 anti-human CD3 Antibody

## Product Data

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Human peripheral lymphocytes were stained with GMP Ultra-LEAF™ Biotin anti-human CD3 SF antibody (clone OKT3) (filled histogram) or isotype control (clone MOP-173) (open histogram), followed by Streptavidin-PE stain.



PBMC-derived T cells were activated in the presence of GMP Ultra-LEAF™ Biotin anti-human CD28 SF antibody (Cat. No. 302978) alone, GMP Ultra-LEAF™ Biotin anti-human CD3 SF antibody (Cat. No. 317358) alone, or the combination of both antibodies (Cat. No. 302978 and 317358) for a period of 4 days. Activation was done via plate coating, with 1 µg/mL of each antibody. Cells were cultured for a total of 11 days and viable cell number was determined

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