

## Biotin anti-human CD3 Antibody

<b>Catalog# / Size</b>	344820 / 100 µg
<b>Clone</b>	SK7
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	HCDM listed
<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, 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

<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.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with biotin 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="#">FC - Quality tested</a> <a href="#">ICC - Verified</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>	Additional reported application (for the relevant formats) include: immunohistochemical staining of frozen tissue sections <sup>4,5,8</sup> , immunofluorescent staining <sup>6</sup> , and Western blotting <sup>3</sup> .
<b>Application References</b>	<ol style="list-style-type: none"> <li>1. Kan EA, <i>et al.</i> 1983. <i>J. Immunol.</i> 131:536.</li> <li>2. Wood GS, <i>et al.</i> 1985. <i>Am. J. Pathol.</i> 120:371.</li> <li>3. Van Dongen JJM, <i>et al.</i> 1988. <i>Blood</i> 71:603. (WB)</li> <li>4. Haringman JJ, <i>et al.</i> 2005. <i>Arthritis Res. Ther.</i> 7:R862. (IHC)</li> <li>5. Carbone A, <i>et al.</i> 1999. <i>Blood</i> 93:2319. (IHC)</li> <li>6. Goyal JJ, <i>et al.</i> 2006. <i>J. Histochem. Cytochem.</i> 54:75. (IF)</li> <li>7. Rutjens E, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:1702.</li> <li>8. Kap Y, <i>et al.</i> 2009. <i>J. Histochem. Cytochem.</i> 57:1159. (IHC)</li> <li>9. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)</li> </ol>
<b>Product Citations</b>	<ol style="list-style-type: none"> <li>1. Comrie W, <i>et al.</i> 2015. <i>J Cell Biol.</i> 208:475. <a href="#">PubMed</a></li> <li>2. Rossatti P, <i>et al.</i> 2019. <i>Cells.</i> 1.297222222. <a href="#">PubMed</a></li> <li>3. Ye CJ, <i>et al.</i> 2018. <i>Genome Res.</i> 28:1812. <a href="#">PubMed</a></li> </ol>
<b>RRID</b>	AB_10662538 (BioLegend Cat. No. 344820)

## 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, during 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, Tregs
<b>Biology Area</b>	Immunology, Innate Immunity
<b>Molecular Family</b>	CD Molecules, TCRs
<b>Antigen References</b>	1. Barclay N, <i>et al.</i> 1993. The Leucocyte FactsBook. Academic Press. San Diego. 2. Beverly P, <i>et al.</i> 1981. <i>Eur. J. Immunol.</i> 11:329. 3. 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](#)

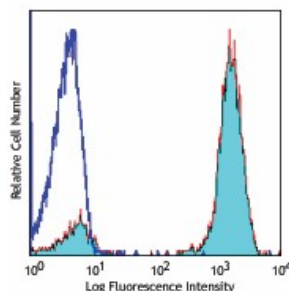
## Other Formats

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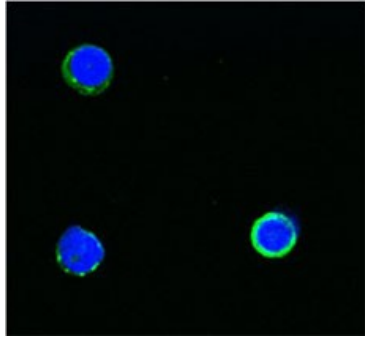
APC/Fire™ 750 anti-human CD3, Biotin anti-human CD3, Purified anti-human CD3, FITC anti-human CD3, PE anti-human CD3, Alexa Fluor® 488 anti-human CD3, APC anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, PerCP anti-human CD3, PE/Cyanine7 anti-human CD3, APC/Cyanine7 anti-human CD3, Alexa Fluor® 700 anti-human CD3, Pacific Blue™ anti-human CD3, Alexa Fluor® 647 anti-human CD3, Brilliant Violet 510™ anti-human CD3, Brilliant Violet 421™ anti-human CD3, Brilliant Violet 605™ anti-human CD3, Brilliant Violet 711™ anti-human CD3, Brilliant Violet 785™ anti-human CD3, PE/Dazzle™ 594 anti-human CD3, Brilliant Violet 750™ anti-human CD3, TotalSeq™-A0049 anti-human CD3, TotalSeq™-C0049 anti-human CD3, Spark Blue™ 550 anti-human CD3, TotalSeq™-B0049 anti-human CD3, Alexa Fluor® 660 anti-human CD3, APC/Fire™ 810 anti-human CD3, Spark NIR™ 685 anti-human CD3, PE/Fire™ 640 anti-human CD3, PE/Fire™ 700 anti-human CD3, GMP FITC anti-human CD3, PE/Cyanine5 anti-human CD3 Antibody, GMP PE anti-human CD3, GMP APC anti-human CD3, GMP PerCP/Cyanine5.5 anti-human CD3, Spark YG™ 593 anti-human CD3, GMP PerCP anti-human CD3, Spark Violet™ 500 anti-human CD3

## Product Data

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Human peripheral blood lymphocytes stained with biotinylated anti-human CD3 (clone SK7, filled histogram) or biotinylated mouse IgG1,  $\kappa$  (open histogram) isotype control, followed by SAV-PE



Human PBMCs, stimulated with 1 µg/ml of LPS for 8 h and treated with Brefeldin A during the last 4 h, were prepared by cytopspin, fixed and permeabilized on a slide and then treated with endogenous biotin blocking kit (Vector labs). Slides were stained with anti-human CD3 biotin (clone SK7) and DyLight™ 649 streptavidin (green) and counterstained with DAPI (blue). Images were acquired with an Olympus FV10i confocal microscope. Images courtesy of Teresa Rodriguez, Darius Schneider, and Matthias von Herrath, LaJolla Institute for Allergy and Immunology.

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