

## APC/Fire™ 810 anti-mouse CD3ε Antibody

<b>Catalog# / Size</b>	100379 / 25 µg 100380 / 100 µg
<b>Clone</b>	145-2C11
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	CD3ε, T3, CD3
<b>Isotype</b>	Armenian Hamster IgG
<b>Description</b>	CD3ε is a 20 kD transmembrane protein, also known as CD3 or T3. It is a member of the Ig superfamily and primarily expressed on T cells, NK-T cells, and at different levels on thymocytes during T cell differentiation. CD3ε forms a TCR complex by associating with the CD3δ, γ and ζ chains, as well as the TCR α/β or γ/δ chains. CD3 plays a critical role in TCR signal transduction, T cell activation, and antigen recognition by binding the peptide/MHC antigen complex.

### Product Details

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Armenian Hamster
<b>Immunogen</b>	H-2K <sup>b</sup> -specific mouse cytotoxic T lymphocyte clone BM10-37
<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 APC/Fire™ 810 under optimal conditions.
<b>Concentration</b>	0.2 mg/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 ≤ 0.25 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* APC/Fire™ 810 has a maximum excitation of 650 nm and a maximum emission of 810 nm.</p> <p>Excessive exposure to light, and commonly used fixation, permeabilization buffers can affect APC/Fire™ 810 fluorescence signal intensity and spread. Please keep conjugates protected from light exposure. For more information and representative data, visit our <a href="#">Fire Dyes</a> page.</p>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<p>Clone 145-2C11 is useful for <i>in vitro</i> blocking of target-specific CTL-mediated cell lysis<sup>1</sup>, as well as T cell activation assays, inducing proliferation and cytokine production<sup>1,2,7,12,16</sup>. It also induces apoptosis in immature thymocytes<sup>32</sup>, and <i>in vivo</i> T cell depletion<sup>8-10</sup>. Additional reported applications (for relevant formats of this clone) include: immunoprecipitation<sup>1</sup>, immunohistochemical staining<sup>14,15</sup> of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, Western blotting<sup>4</sup>, complement-mediated cytotoxicity<sup>6</sup>, <i>in vitro</i> and <i>in vivo</i> stimulation of T cells<sup>1,2,7,12,16</sup>, immunofluorescent staining<sup>5</sup>, and <i>in vivo</i> T cell depletion<sup>8-10</sup>. The 145-2C11 antibody has been reported to block the binding of 17A2 antibody to CD3 epsilon-specific T cells<sup>11</sup>. Clone 145-2C11 is not recommended for formalin-fixed paraffin embedded sections. The LEAF™ purified antibody (Endotoxin &lt;0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 100314). For <i>in vivo</i> studies or highly sensitive</p>

assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100340) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/μg).

#### Application References

(PubMed link indicates BioLegend citation)

1. Leo O, *et al.* 1987. *P. Natl. Acad. Sci. USA* 84:1374. (IP, Activ, Block)
2. Kruisbeek AM, *et al.* 1991. *In Current Protocols in Immunology*. 3.12.1. (Activ)
3. Duke RC, *et al.* 1995. *Current Protocols in Immunology*. 3.17.1.
4. Salvadori S, *et al.* 1994. *J. Immunol.* 153:5176. (WB)
5. Payer E, *et al.* 1991. *J. Immunol.* 146:2536. (IF)
6. Jacobs H, *et al.* 1994. *Eur. J. Immunol.* 24:934. (CMCD)
7. Vossen ACTM, *et al.* 1995. *Eur. J. Immunol.* 25:1492. (Activ)
8. Henrickson M, *et al.* 1995. *Transplantation* 60:828. (Deplete)
9. Kinnaert P, *et al.* 1996. *Transpl. Int.* 9:386. (Deplete)
10. Han WR, *et al.* 1999. *Transpl. Immunol.* 7:207. (Deplete)
11. Miescher GC, *et al.* 1989. *Immunol. Lett.* 23:113. (Block)
12. Terrazas LI, *et al.* 2005. *Intl. J. Parasitology.* 35:1349. (Activ)

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#### RRID

AB\_3698886 (BioLegend Cat. No. 100379)  
AB\_3698886 (BioLegend Cat. No. 100380)

## Antigen Details

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<b>Structure</b>	Ig superfamily, forms CD3/TCR complex with CD3δ, γ and ζ subunits and TCR (α/β and γ/δ), 20 kD
<b>Distribution</b>	Thymocytes (differentiation dependent), mature T cells, NK-T cells
<b>Function</b>	TCR signal transduction, T cell activation, antigen recognition
<b>Ligand/Receptor</b>	Peptide antigen/MHC-complex
<b>Cell Type</b>	NKT cells, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules, TCRs
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.</li><li>2. Davis MM. 1990. <i>Annu. Rev. Biochem.</i> 59:475.</li><li>3. Weiss A, <i>et al.</i> 1994. <i>Cell</i> 76:263.</li></ol>
<b>Gene ID</b>	<a href="#">12501</a>

## Related Protocols

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- [Cell Surface Flow Cytometry Staining Protocol](#)

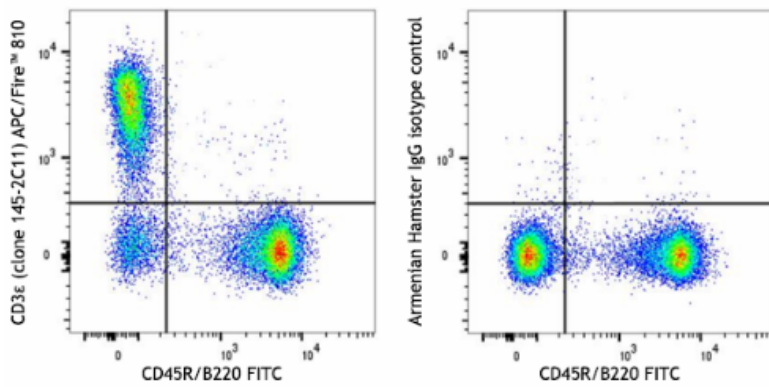
## Other Formats

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APC anti-mouse CD3ε, Biotin anti-mouse CD3ε, FITC anti-mouse CD3ε, PE anti-mouse CD3ε, PE/Cyanine5 anti-mouse CD3ε, Purified anti-mouse CD3ε, PE/Cyanine7 anti-mouse CD3ε, Alexa Fluor® 488 anti-mouse CD3ε, Alexa Fluor® 647 anti-mouse CD3ε, PerCP anti-mouse CD3ε, PerCP/Cyanine5.5 anti-mouse CD3ε, Purified anti-mouse CD3ε (Maxpar® Ready), APC/Cyanine7 anti-mouse CD3ε, Pacific Blue™ anti-mouse CD3ε, Brilliant Violet 421™ anti-mouse CD3ε, Ultra-LEAF™ Purified anti-mouse CD3ε, PE/Dazzle™ 594 anti-mouse CD3ε, Brilliant Violet 510™ anti-mouse CD3ε, Brilliant Violet 605™ anti-mouse CD3ε, Brilliant Violet 711™ anti-mouse CD3ε, Brilliant Violet 785™ anti-mouse CD3ε, APC/Fire™ 750 anti-mouse CD3ε, GoInVivo™ Purified anti-mouse CD3ε, Spark YG™ 593 anti-mouse CD3, PerCP/Fire™ 780 anti-mouse CD3ε, Brilliant Violet 650™ anti-mouse CD3ε, Brilliant Violet 750™ anti-mouse CD3ε, APC/Fire™ 810 anti-mouse CD3ε Antibody, Spark YG™ 581 anti-mouse CD3ε (Flexi-Fluor™), Spark NIR™ 685 anti-mouse CD3ε (Flexi-Fluor™) Antibody

## Product Data

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C57BL/6 splenocytes were stained with anti-mouse CD45R/B220 (clone RA3-6B2) FITC and anti-mouse CD3ε (clone 145-2C11) APC/Fire™ 810 (left) or stained with anti-mouse CD45R/B220 (clone RA3-6B2) FITC only (right).

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