

## PE/Cyanine5 anti-mouse CD3 $\epsilon$ Antibody

<b>Catalog# / Size</b>	100309 / 25 $\mu$ g 100310 / 100 $\mu$ g
<b>Clone</b>	145-2C11
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	CD3 $\epsilon$ , T3, CD3
<b>Isotype</b>	Armenian Hamster IgG
<b>Description</b>	CD3 $\epsilon$ 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. CD3 $\epsilon$ forms a TCR complex by associating with the CD3 $\delta$ , $\gamma$ and $\zeta$ chains, as well as the TCR $\alpha/\beta$ or $\gamma/\delta$ 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

<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 PE/Cyanine5 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>	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 $\leq 1.0$ $\mu$ g per million cells in 100 $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	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 <0.1 EU/ $\mu$ g, Azide-Free, 0.2 $\mu$ m filtered) is recommended for functional assays (Cat. No. 100314). For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100340) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/ $\mu$ g).
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name PE/Cy5 to PE/Cyanine5. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine5 products. Please contact <a href="#">Technical Service</a> if you have any questions.

## Application References

(PubMed link indicates  
BioLegend citation)

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## RRID

AB\_312674 (BioLegend Cat. No. 100309)  
AB\_312675 (BioLegend Cat. No. 100310)

## Antigen Details

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<b>Structure</b>	Ig superfamily, forms CD3/TCR complex with CD3 $\delta$ , $\gamma$ and $\zeta$ subunits and TCR ( $\alpha/\beta$ and $\gamma/\delta$ ), 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>	1. Barclay A, <i>et al.</i> 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Davis MM. 1990. <i>Annu. Rev. Biochem.</i> 59:475. 3. Weiss A, <i>et al.</i> 1994. <i>Cell</i> 76:263.
<b>Gene ID</b>	<a href="#">12501</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

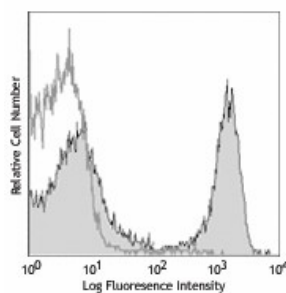
## Other Formats

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APC anti-mouse CD3 $\epsilon$ , Biotin anti-mouse CD3 $\epsilon$ , FITC anti-mouse CD3 $\epsilon$ , PE anti-mouse CD3 $\epsilon$ , PE/Cyanine5 anti-mouse CD3 $\epsilon$ , Purified anti-mouse CD3 $\epsilon$ , PE/Cyanine7 anti-mouse CD3 $\epsilon$ , Alexa Fluor® 488 anti-mouse CD3 $\epsilon$ , Alexa Fluor® 647 anti-mouse CD3 $\epsilon$ , PerCP anti-mouse CD3 $\epsilon$ , PerCP/Cyanine5.5 anti-mouse CD3 $\epsilon$ , Purified anti-mouse CD3 $\epsilon$  (Maxpar® Ready), APC/Cyanine7 anti-mouse CD3 $\epsilon$ , Pacific Blue™ anti-mouse CD3 $\epsilon$ , Brilliant Violet 421™ anti-mouse CD3 $\epsilon$ , Ultra-LEAF™ Purified anti-mouse CD3 $\epsilon$ , PE/Dazzle™ 594 anti-mouse CD3 $\epsilon$ , Brilliant Violet 510™ anti-mouse CD3 $\epsilon$ , Brilliant Violet 605™ anti-mouse CD3 $\epsilon$ , Brilliant Violet 711™ anti-mouse CD3 $\epsilon$ , Brilliant Violet 785™ anti-mouse CD3 $\epsilon$ , APC/Fire™ 750 anti-mouse CD3 $\epsilon$ , GolnVivo™ Purified anti-mouse CD3 $\epsilon$ , Spark YG™ 593 anti-mouse CD3

## Product Data

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C57BL/6 mouse splenocytes were stained with CD3 $\epsilon$  (clone 145-2C11) PE/Cyanine5 (filled histogram) or Armenian hamster IgG PE/Cyanine5 isotype control (open histogram).

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