

Pacific Blue™ anti-mouse CD3ε Antibody

Catalog# / Size	100333 / 25 µg 100334 / 100 µg
Clone	145-2C11
Regulatory Status	RUO
Other Names	CD3ε, T3, CD3
Isotype	Armenian Hamster IgG
Description	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

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	H-2K ^b -specific mouse cytotoxic T lymphocyte clone BM10-37
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤1.0 µg per 10⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Violet Laser (405 nm)
Application Notes	<p>Clone 145-2C11 is useful for <i>in vitro</i> blocking of target-specific CTL-mediated cell lysis¹, as well as T cell activation assays, inducing proliferation and cytokine production^{1,2,7,12,16}. It also induces apoptosis in immature thymocytes³², and <i>in vivo</i> T cell depletion⁸⁻¹⁰. Additional reported applications (for relevant formats of this clone) include: immunoprecipitation¹, immunohistochemical staining^{14,15} of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, Western blotting⁴, complement-mediated cytotoxicity⁶, <i>in vitro</i> and <i>in vivo</i> stimulation of T cells^{1,2,7,12,16}, immunofluorescent staining⁵, and <i>in vivo</i> T cell depletion⁸⁻¹⁰. The 145-2C11 antibody has been reported to block the binding of 17A2 antibody to CD3 epsilon-specific T cells¹¹. Clone 145-2C11 is not recommended for formalin-fixed paraffin embedded sections. The LEAF™ purified antibody (Endotoxin <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 assays, we recommend Ultra-LEAF™ purified</p>

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)

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Product Citations

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RRID

AB_2028473 (BioLegend Cat. No. 100333)
AB_2028475 (BioLegend Cat. No. 100334)

Antigen Details

Structure	Ig superfamily, forms CD3/TCR complex with CD3δ, γ and ζ subunits and TCR (α/β and γ/δ), 20 kD
Distribution	Thymocytes (differentiation dependent), mature T cells, NK-T cells
Function	TCR signal transduction, T cell activation, antigen recognition
Ligand/Receptor	Peptide antigen/MHC-complex
Cell Type	NKT cells, T cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules, TCRs
Antigen References	<ol style="list-style-type: none">1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> 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.
Gene ID	12501

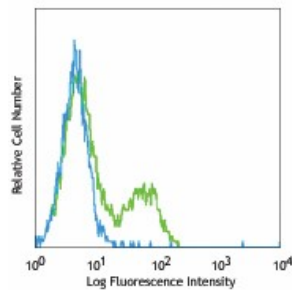
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

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

Product Data



C57BL/6 mouse splenocytes were stained with CD3 ϵ (clone 145-2C11) Pacific Blue™ or Armenian hamster IgG Pacific Blue™ isotype control.

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