Purified anti-mouse CD3ε (Maxpar® Ready) Antibody

Catalog# / Size	100345 / 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 and EDTA.
Preparation	The antibody was purified by affinity chromatography.
Concentration	1.0 mg/ml
Storage & Handling	The CD3ε antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested CyTOF® - Verified
Recommended Usage	This product is suitable for use with the Maxpar® Metal Labeling Kits. For metal labeling using Maxpar® Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar® Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar® User Guide when conjugating Maxpar® Ready antibodies.
Application Notes	Clone 145-2C11 is useful for *in vitro* blocking of target-specific CTL-mediated cell lysis[1], as well as T cell activation assays, inducing proliferation and cytokine production[1,2,7,12,16]. It also induces apoptosis in immature thymocytes[32], and *in vivo* T cell depletion[8-10]. Additional reported applications (for relevant formats of this clone) include: immunoprecipitation[1], immunohistochemical staining[14,15] of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, Western blotting[4], complement-mediated cytotoxicity[6], *in vitro* and *in vivo* stimulation of T cells[1,2,7,12,16], immunofluorescent staining[5], and *in vivo* T cell depletion8-10. The 145-2C11 antibody has been reported to block the binding of 17A2 antibody to CD3 epsilon-specific T cells[11]. 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 *in vivo* 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/µg).
Additional Product Notes	Maxpar® is a registered trademark of Standard BioTools Inc

Application References

(PubMed link indicates BioLegend citation)

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Product Citations

1. Oudelaar AM, *et al.* 2020. Nat Commun. 2.348611111. PubMed
2. McDonald B, *et al.* 2020. Cell Host Microbe. 28(5):660-668.e4. PubMed

RRID AB_2563748 (BioLegend Cat. No. 100345)

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	1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Davis MM. 1990. *Annu. Rev. Biochem.* 59:475. 3. Weiss A, *et al.* 1994. *Cell* 76:263.
Gene ID	12501

Related Protocols

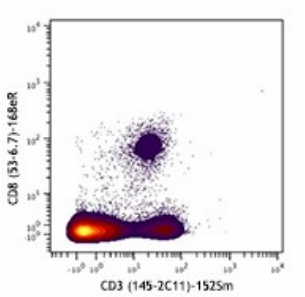
Cell Surface Flow Cytometry Staining Protocol

Other Formats

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

Product Data



Mouse splenocytes stained with 152Sm anti-CD3e (145-2C11) and 168Er anti-CD8 (53-6.7). Total viable cells are displayed in the analysis. Data provided by DVS Sciences.

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