

FITC anti-mouse CD3ε Antibody

Catalog# / Size	100305 / 50 µg 100306 / 500 µg
Clone	145-2C11
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

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 FITC 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	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 million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm)
Application Notes	Clone 145-2C11 is useful for <i>in vitro</i> 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 <i>in vivo</i> 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 , <i>in vitro</i> and <i>in vivo</i> stimulation of T cells ^{1,2,7,12,16} , immunofluorescent staining ⁵ , and <i>in vivo</i> T cell depletion ⁸⁻¹⁰ . 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 <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/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)

Product Citations

1. Koning B, et al. 2006. Int Immunol. 1.403472222. PubMed
2. Schulteis R, et al. 2008. Blood. 112:4905. PubMed
3. Kanaya T, et al. 2008. Am J Physiol Gastrointest Liver Physiol. 295:273. PubMed
4. Patnode M, et al. 2013. Glycobiology. 23:381. PubMed
5. Xu M, et al. 2013. J Immunol. 190:5436. PubMed
6. Huang J, et al. 2014. J Immunol. 192:1972. PubMed
7. Collin R, et al. 2014. J Immunol. 193:3503. PubMed
8. Ikeda T, et al. 2014. PLoS One. 9:115198. PubMed
9. Burrack K, et al. 2015. J Immunol. 194:678. PubMed
10. Yin Q, et al. 2015. PLoS One. 10: 0137808. PubMed
11. Ma Y, et al. 2015. J Immunol. 195: 3769 - 3780. PubMed
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RRID

AB_312670 (BioLegend Cat. No. 100305)
AB_312671 (BioLegend Cat. No. 100306)

Antigen Details

Structure	Ig superfamily, forms CD3/TCR complex with CD3 δ , 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, 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

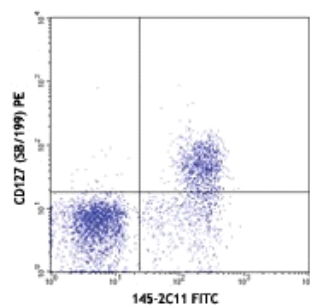
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse CD3 ϵ , Biotin 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) FITC and CD127 (clone SB/199) PE.

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