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CD3e Monoclonal Antibody (145-2C11), PE-Cyanine5, eBioscience™

Catalog Number 15-0031-81

Product data sheet

Details	
Size	50 µg
Host/Isotope	Armenian hamster / IgG
Class	Monoclonal
Type	Antibody
Clone	145-2C11
Conjugate	PE-Cyanine5
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage Conditions	4° C, store in dark, DO NOT FREEZE!

Species Reactivity	
Species reactivity	Mouse
Published species	Mouse, Human, Not Applicable

Tested Applications	Dilution *
Flow Cytometry (Flow)	0.25 µg/test

Published Applications	
Flow Cytometry (Flow)	See 49 publications below
Immunohistochemistry (Frozen) (IHC (F))	See 2 publications below
Functional Assay (FN)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

Description: The 145-2C11 monoclonal antibody reacts with mouse CD3e, a 20 kDa subunit of the TCR complex. Along with the other CD3 subunits, gamma and delta, the epsilon chain is required for proper assembly, trafficking and surface expression of the TCR complex. CD3 is expressed by thymocytes in a developmentally regulated manner and by all mature T cells. Binding of 145-2C11 to TCR initiates the intracellular biochemical pathway resulting in cellular activation, proliferation, and apoptosis depending on specific conditions utilized. 145-2C11 is commonly used as a phenotypic marker for mouse T cells. Applications Reported: The 145-2C11 antibody has been reported for use in flow cytometric analysis. Applications Tested: The 145-2C11 antibody has been tested by flow cytometric analysis of mouse thymocytes and splenocytes. This can be used at less than or equal to 0.25 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest. Light sensitivity: This tandem dye is sensitive photo-induced oxidation. Please protect this vial and stained samples from light. Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL cell sample + 100 µL IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically. Excitation: 488-561 nm; Emission: 667 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser. Filtration: 0.2 µm post-manufacturing filtered.

Background/Target Information

The CD3 subunit complex which is crucial in transducing antigen-recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR complex. T cell activation through the antigen receptor (TCR) involves the cytoplasmic tails of the CD3 subunits CD3 gamma, CD3 delta, CD3 epsilon and CD3 zeta. These CD3 subunits are structurally related members of the immunoglobulins super family encoded by closely linked genes on human chromosome 11. The CD3 components have long cytoplasmic tails that associate with cytoplasmic signal transduction molecules and this association is mediated at least in part by a double tyrosine-based motif present in a single copy in the CD3 subunits. CD3 may play a role in TCR-induced growth arrest, cell survival and proliferation. The CD3 antigen is present on 68-82% of normal peripheral blood lymphocytes, 65-85% of thymocytes and Purkinje cells in the cerebellum. It is never expressed on B or NK cells. Decreased percentages of T lymphocytes may be observed in some autoimmune diseases. The genes encoding the CD3 epsilon, gamma and delta polypeptides are located on chromosome 11. Defects in the CD3 gene are associated with CD3 immunodeficiency.

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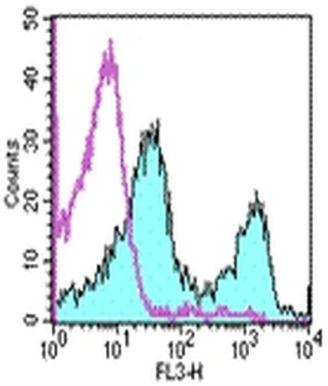
Product Images For CD3e Monoclonal Antibody (145-2C11), PE-Cyanine5, eBioscience™



CD3e Antibody (15-0031-81) in Flow

Staining of BALB/c splenocytes with staining buffer (autofluorescence) (open histogram) or 0.125 µg of Anti-Mouse CD3e PE-Cyanine5 (filled histogram).Total cells were used for analysis.

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PubMed References For CD3e Monoclonal Antibody (145-2C11), PE-Cyanine5, eBioscience™

49 Flow Cytometry References

Species / Dilution	Summary
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to investigate whether T cells and/or NK cells contribute to circulatory control during pregnancy. Biology of reproduction (2011; 85: 605) **"Cardiovascular adaptations of pregnancy in T and B cell-deficient mice."** Author(s):Burke SD,Barrette VF,Carter AL,Gravel J,Adams MA,Croy BA PubMed Article URL:http://dx.doi.org/10.1095/biolreprod.111.092668
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to study the use of a combined immunogene therapy and regulatory T-cell inactivation against weakly immunogenic solid tumours. Cancer gene therapy (2010; 17: 501) **"Effective immunotherapy of weakly immunogenic solid tumours using a combined immunogene therapy and regulatory T-cell inactivation."** Author(s):Whelan MC,Casey G,MacConmara M,Lederer JA,Soden D,Collins JK,Tangney M,O'Sullivan GC PubMed Article URL:http://dx.doi.org/10.1038/cgt.2010.8
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to generate vaccine platforms targeting a malarial parasite protein and assess them for protective efficacy. Clinical and vaccine immunology : CVI (2017; 24:) **"Evaluation of Plasmodium vivax Cell-Traversal Protein for Ookinetes and Sporozoites as a Preerythrocytic P. vivax Vaccine."** Author(s):Alves E,Salman AM,Leoratti F,Lopez-Camacho C,Viveros-Sandoval ME,Lall A,El-Turabi A,Bachmann MF,Hill AV,Janse CJ,Khan SM,Reyes-Sandoval A PubMed Article URL:http://dx.doi.org/10.1128/CVI.00501-16
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to suggest differential roles of DC-NK cell cross talk at different stages of Leishmania infection. Infection and immunity (2008; 76: 5100) **"Role of natural killer cells in modulating dendritic cell responses to Leishmania amazonensis infection."** Author(s):Sanabria MX,Vargas-Inchaustegui DA,Xin L,Soong L PubMed Article URL:http://dx.doi.org/10.1128/IAI.00438-08
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to examine the effects of lactosucrose (4(G)--D-galactosylsucrose) on influenza A virus infections in mice. Bioscience of microbiota, food and health (2015; 34: 67) **"Dietary lactosucrose suppresses influenza A (H1N1) virus infection in mice."** Author(s):Kishino E,Takemura N,Masaki H,Ito T,Nakazawa M PubMed Article URL:http://dx.doi.org/10.12938/bmfh.2015-005
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to show that monocyte-derived inflammatory DCs'' are a mixture of monocyte-derived MCs that have little migratory and APC potential and bona fide pre-cDCderived, CD26-expressing inf-cDC2s that depend on Flt3L but not on GM-CSF. Immunity (2020; 52: 1039) **"Inflammatory Type 2 cDCs Acquire Features of cDC1s and Macrophages to Orchestrate Immunity to Respiratory Virus Infection."** Author(s):Bosteels C,Neyt K,Vanheerswynghels M,van Helden MJ,Sichien D,Debeuf N,De Prijck S,Bosteels V,Vandamme N,Martens L,Saeys Y,Louagie E,Lesage M,Williams DL,Tang SC,Mayer JU,Ronchese F,Scott CL,Hammad H,Guilliams M,Lambrecht BN PubMed Article URL:http://dx.doi.org/10.1016/j.immuni.2020.04.005
Mouse / Not Cited	15-0031 was used in Flow cytometry/Cell sorting to demonstrate roles for retinoid signaling and the DERARE in maintaining HSCs and preventing leukemogenesis by coordinate regulation of Hoxb genes. Cell stem cell (2018; 22: 740) **"Retinoid-Sensitive Epigenetic Regulation of the Hoxb Cluster Maintains Normal Hematopoiesis and Inhibits Leukemogenesis."** Author(s):Qian P,De Kumar B,He XC,Nolte C,Gogol M,Ahn Y,Chen S,Li Z,Xu H,Perry JM,Hu D,Tao F,Zhao M,Han Y,Hall K,Peak A,Paulson A,Zhao C,Venkatraman A,Box A,Perera A,Haug JS,Parmely T,Li H,Krumlauf R,Li L PubMed Article URL:http://dx.doi.org/10.1016/j.stem.2018.04.012

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Mouse / Not Cited	Proceedings of the National Academy of Sciences of the United States of America (2006; 103: 17852) **"Developmental switch of mouse hematopoietic stem cells from fetal to adult type occurs in bone marrow after birth."** Author(s):Kikuchi K,Kondo M PubMed Article URL:http://dx.doi.org/10.1073/pnas.0603368103
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Mouse / Not Cited	American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons (2015; 15: 954) **"Negative CD4+TIM-3 signaling confers resistance against cold preservation damage in mouse liver transplantation."** Author(s):Liu Y,Ji H,Zhang Y,Shen XD,Gao F,Nguyen TT,Shang X,Lee N,Busuttil RW,Kupiec-Weglinski JW PubMed Article URL:http://dx.doi.org/10.1111/ajt.13067
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Mouse / Not Cited	PloS one (2017; 11:) **"Alkylator-Induced and Patient-Derived Xenograft Mouse Models of Therapy-Related Myeloid Neoplasms Model Clinical Disease and Suggest the Presence of Multiple Cell Subpopulations with Leukemia Stem Cell Activity."** Author(s):Jonas BA,Johnson C,Gratzinger D,Majeti R PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0159189
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Mouse / Not Cited	International journal of oncology (2018; 53: 1580) **"Intraperitoneal neutrophils activated by KRAS-induced ovarian cancer exert antitumor effects by modulating adaptive immunity."** Author(s):Yoshida M,Taguchi A,Kawana K,Ogishima J,Adachi K,Kawata A,Nakamura H,Sato M,Fujimoto A,Inoue T,Tomio K,Mori M,Nagamatsu T,Arimoto T,Koga K,Hiraike OW,Oda K,Kiyono T,Osuga Y,Fujii T PubMed Article URL:http://dx.doi.org/10.3892/ijo.2018.4504
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Mouse / Not Cited	European journal of immunology (2012; 42: 120) **"B-1 cells in the bone marrow are a significant source of natural IgM."** Author(s):Choi YS,Dieter JA,Rothaeusler K,Luo Z,Baumgarth N PubMed Article URL:http://dx.doi.org/10.1002/eji.201141890

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Human / Not Cited	Parasite (Paris, France) (2020; 26:) **"Regulation of host immune cells and cytokine production induced by Trichinella spiralis infection."** Author(s):Song Y,Xu J,Wang X,Yang Y,Bai X,Pang J,Wang X,Yu M,Liu M,Liu X,Sun S PubMed Article URL:http://dx.doi.org/10.1051/parasite/2019074
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Mouse / Not Cited	JCI insight (2016; 1:) **"Heterogeneous fibroblasts underlie age-dependent tertiary lymphoid tissues in the kidney."** Author(s):Sato Y,Mii A,Hamazaki Y,Fujita H,Nakata H,Masuda K,Nishiyama S,Shibuya S,Haga H,Ogawa O,Shimizu A,Narumiya S,Kaisho T,Arita M,Yanagisawa M,Miyasaka M,Sharma K,Minato N,Kawamoto H,Yanagita M PubMed Article URL:http://dx.doi.org/10.1172/jci.insight.87680
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Mouse / Not Cited	Cell reports (2019; 28: 1703) **"m⁶A RNA Methylation Maintains Hematopoietic Stem Cell Identity and Symmetric Commitment."** Author(s):Cheng Y,Luo H,Izzo F,Pickering BF,Nguyen D,Myers R,Schurer A,Gourkanti S,Brüning JC,Vu LP,Jaffrey SR, Landau DA,Kharas MG PubMed Article URL:http://dx.doi.org/10.1016/j.celrep.2019.07.032
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Mouse / Not Cited	Nature communications (2020; 11:) **"HyperTRIBE uncovers increased MUSASHI-2 RNA binding activity and differential regulation in leukemic stem cells."** Author(s):Nguyen DTT,Lu Y,Chu KL,Yang X,Park SM,Choo ZN,Chin CR,Prieto C,Schurer A,Barin E,Savino AM,Gourkanti S,Patel P,Vu LP,Leslie CS,Kharas MG PubMed Article URL:http://dx.doi.org/10.1038/s41467-020-15814-8
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