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Performance guaranteed

CD5 Monoclonal Antibody (53-7.3), APC, eBioscience™

Catalog Number 17-0051-82

Product data sheet

Details	
Size	100 µg
Host/Isotope	Rat / IgG2a, kappa
Class	Monoclonal
Type	Antibody
Clone	53-7.3
Conjugate	APC
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, Not Applicable

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

Published Applications	
Flow Cytometry (Flow)	See 18 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 53-7.3 monoclonal antibody reacts with mouse CD5, a 67 kDa protein expressed by a majority of thymocytes, mature T cells and a subset of B cells. The expression of CD5 by a small subset of B cells characterizes a developmentally and functionally distinct lineage of B cells called B-1 cells. CD5 is a counter-receptor for CD72 and plays a role in the T-B cell interaction. Applications Reported: This 53-7.3 antibody has been reported for use in flow cytometric analysis. Applications Tested: This 53-7.3 antibody has been tested by flow cytometric analysis of mouse 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. Excitation: 633-647 nm; Emission: 660 nm; Laser: Red Laser. Filtration: 0.2 µm post-manufacturing filtered.

Background/Target Information

CD5 is a 67 kDa human T-lymphocyte single-chain transmembrane glycoprotein. CD5 is present on all mature T-lymphocytes, on most of thymocytes and on many T-cell leukemias and lymphomas. CD5 also reacts with a subpopulation of activated B-cells and may act as a receptor in regulating T-cell proliferation. CD5 is found on 95% of thymocytes and 72% of peripheral blood lymphocytes. In lymph nodes, the main reactivity is observed in T cell areas. CD5 is expressed by many T cell leukemia, lymphomas, and activated T cells. Diseases associated with CD5 dysfunction include thymus cancer and Richter's Syndrome.

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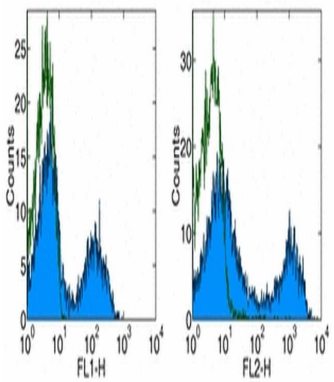
Product Images For CD5 Monoclonal Antibody (53-7.3), APC, eBioscience™



CD5 Antibody (17-0051-82) in Flow

Staining of mouse splenocytes with Anti-Mouse CD5 FITC (left), and PE (right). Appropriate isotype controls were used (open histogram). Total viable cells were used for analysis.

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PubMed References For CD5 Monoclonal Antibody (53-7.3), APC, eBioscience™

18 Flow Cytometry References

Species / Dilution	Summary
Mouse / 1:400	17-0051 was used in Flow cytometry/Cell sorting to reveal a function of B7-CD28 co-stimulation in shaping the T cell repertoire and limiting autoimmunity through both thymic clonal deletion and Treg cell generation. Nature communications (2020; 11:) **"B7-CD28 co-stimulation modulates central tolerance via thymic clonal deletion and Treg generation through distinct mechanisms."** Author(s):Watanabe M,Lu Y,Breen M,Hodes RJ PubMed Article URL:http://dx.doi.org/10.1038/s41467-020-20070-x
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to investigate the effect of MECOM on cellular metabolism. Nature medicine (2017; 23: 301) **"The creatine kinase pathway is a metabolic vulnerability in EVI1-positive acute myeloid leukemia."** Author(s):Fenouille N,Bassil CF,Ben-Sahra I,Benajiba L,Alexe G,Ramos A,Pikman Y,Conway AS,Burgess MR,Li Q, Luciano F,Auberger P,Galinsky I,DeAngelo DJ,Stone RM,Zhang Y,Perkins AS,Shannon K,Hemann MT,Puissant A, Stegmaier K PubMed Article URL:http://dx.doi.org/10.1038/nm.4283
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to show transcriptional sexual dimorphism in macrophages. Nature communications (2019; 10:) **"ImmGen report: sexual dimorphism in the immune system transcriptome."** Author(s):Gal-Oz ST,Maier B,Yoshida H,Seddu K,Elbaz N,Czysz C,Zuk O,Stranger BE,Ner-Gaon H,Shay T PubMed Article URL:http://dx.doi.org/10.1038/s41467-019-12348-6
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to study the role of CTCF in regulating cell-to-cell variation of expression. Molecular cell (2017; 67: 1049) **"CTCF-Mediated Enhancer-Promoter Interaction Is a Critical Regulator of Cell-to-Cell Variation of Gene Expression."** Author(s):Ren G,Jin W,Cui K,Rodrigez J,Hu G,Zhang Z,Larson DR,Zhao K PubMed Article URL:http://dx.doi.org/10.1016/j.molcel.2017.08.026
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to demonstrate how metabolic signals potentiate leukocyte production and dietary priming of haematopoietic progenitors contributes to adipose tissue inflammation. Molecular metabolism (2014; 3: 664) **"Diet-induced obesity promotes myelopoiesis in hematopoietic stem cells."** Author(s):Singer K,DelProposto J,Morris DL,Zamarron B,Mergian T,Maley N,Cho KW,Geletka L,Subbaiah P,Muir L, Martinez-Santibanez G,Lumeng CN PubMed Article URL:http://dx.doi.org/10.1016/j.molmet.2014.06.005
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to investigate the role of the classical pathway activator IgM in complement activated antibody responses. Proceedings of the National Academy of Sciences of the United States of America (2011; 108: E934) **"Requirement for complement in antibody responses is not explained by the classic pathway activator IgM."** Author(s):Rutemark C,Alicot E,Bergman A,Ma M,Getahun A,Ellmerich S,Carroll MC,Heyman B PubMed Article URL:http://dx.doi.org/10.1073/pnas.1109831108
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to investigate the relationship between functional asplenia from infarctions and increased infectious mortality in a mouse model of sickle-cell disease. The American journal of pathology (2012; 181: 1725) **"Splenic morphological changes are accompanied by altered baseline immunity in a mouse model of sickle-cell disease."** Author(s):Szczepanek SM,McNamara JT,Secor ER,Natarajan P,Guernsey LA,Miller LA,Ballesteros E,Jellison E,Thrall RS, Andemariam B PubMed Article URL:http://dx.doi.org/10.1016/j.ajpath.2012.07.034
Mouse / Not Cited	17-0051-82 was used in Flow cytometry/Cell sorting to demonstrate that pathology initiates dermis-specific macrophage differentiation and show that aGVHD-primed macrophages continue to dominate the dermal compartment at the relative expense of quiescent MHCIIint cells. Cell reports (2022; 39:) **"Loss of T cell tolerance in the skin following immunopathology is linked to failed restoration of the dermal niche by recruited macrophages."** Author(s):West HC,Davies J,Henderson S,Adegun OK,Ward S,Ferrer IR,Tye CA,Vallejo AF,Jardine L,Collin M,Polak ME, Bennett CL PubMed Article URL:http://dx.doi.org/10.1016/j.celrep.2022.110819

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	17-0051 was used in Flow cytometry/Cell sorting to investigate the origin of natural IgM, showing that it is produced by CD5- plasma cells that occupy a distinct survival niche in bone marrow.
Mouse / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2015; 194: 231) **"Natural IgM is produced by CD5- plasma cells that occupy a distinct survival niche in bone marrow."** Author(s):Reynolds AE,Kuraoka M,Kelsoe G PubMed Article URL:http://dx.doi.org/10.4049/jimmunol.1401203
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to show that IL4I1 blockade opens new avenues for cancer therapy. Cell (2020; 182: 1252) **"IL4I1 Is a Metabolic Immune Checkpoint that Activates the AHR and Promotes Tumor Progression."** Author(s):Sadik A,Somarribas Patterson LF,Öztürk S,Mohapatra SR,Panitz V,Secker PF,Pfänder P,Loth S,Salem H,Prentzell MT,Berdel B,Iskar M,Faessler E,Reuter F,Kirst I,Kalter V,Foerster KI,Jäger E,Guevara CR,Sobeh M,Hielscher T,Poschet G,Reinhardt A,Hassel JC,Zapatka M,Hahn U,von Deimling A,Hopf C,Schlichting R,Escher BI,Burhenne J,Haefeli WE,Ishaque N,Böhme A,Schäuble S,Thedieck K,Trump S,Seiffert M,Opitz CA PubMed Article URL:http://dx.doi.org/10.1016/j.cell.2020.07.038
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to study how artery tertiary lymphoid organs can orchestrate B-cell responses in the diseased aorta. Arteriosclerosis, thrombosis, and vascular biology (2016; 36: 1174) **"Artery Tertiary Lymphoid Organs Control Multilayered Territorialized Atherosclerosis B-Cell Responses in Aged ApoE-/- Mice."** Author(s):Srikakulapu P,Hu D,Yin C,Mohanta SK,Bontha SV,Peng L,Beer M,Weber C,McNamara CA,Grassia G,Maffia P,Manz RA,Habenicht AJ PubMed Article URL:http://dx.doi.org/10.1161/ATVBAHA.115.306983
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to determine the impact of Fcmr ablation on autoimmunity. International immunology (2014; 26: 659) **"Enhanced auto-antibody production and Mott cell formation in FcR-deficient autoimmune mice."** Author(s):Honjo K,Kubagawa Y,Suzuki Y,Takagi M,Ohno H,Bucy RP,Izui S,Kubagawa H PubMed Article URL:http://dx.doi.org/10.1093/intimm/dxu070
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to study how group 2 innate lymphoid cells regulate adaptive Th2 cell functions. The Journal of experimental medicine (2017; 214: 2507) **"ILC2s regulate adaptive Th2 cell functions via PD-L1 checkpoint control."** Author(s):Schwartz C,Khan AR,Floudas A,Saunders SP,Hams E,Rodewald HR,McKenzie ANJ,Fallon PG PubMed Article URL:http://dx.doi.org/10.1084/jem.20170051
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to suggest that antibody feedback drives the diversification of immune responses and that vaccination for malaria will require targeting multiple antigens. Cell host & microbe (2020; 28: 572) **"Antibody Feedback Limits the Expansion of B Cell Responses to Malaria Vaccination but Drives Diversification of the Humoral Response."** Author(s):McNamara HA,Idris AH,Sutton HJ,Vistein R,Flynn BJ,Cai Y,Wiehe K,Lyke KE,Chatterjee D,Kc N,Chakravarty S,Lee Sim BK,Hoffman SL,Bonsignori M,Seder RA,Cockburn IA PubMed Article URL:http://dx.doi.org/10.1016/j.chom.2020.07.001
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to investigate the role of ADAM10 cleavage events in immune cell development. The Journal of experimental medicine (2010; 207: 623) **"ADAM10 is essential for Notch2-dependent marginal zone B cell development and CD23 cleavage in vivo."** Author(s):Gibb DR,El Shikh M,Kang DJ,Rowe WJ,El Sayed R,Cichy J,Yagita H,Tew JG,Dempsey PJ,Crawford HC,Conrad DH PubMed Article URL:http://dx.doi.org/10.1084/jem.20091990
Mouse / Not Cited	17-0051 was used in Flow cytometry/Cell sorting to examine the effect of blocking TCR-dependent nuclear export of HDAC7 during thymic selection, showing that HDAC7 is required for immune self-tolerance. The EMBO journal (2012; 31: 4453) **"Nuclear export of histone deacetylase 7 during thymic selection is required for immune self-tolerance."** Author(s):Kasler HG,Lim HW,Mottet D,Collins AM,Lee IS,Verdin E PubMed Article URL:http://dx.doi.org/10.1038/emboj.2012.295

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	17-0051 was used in Flow cytometry/Cell sorting to study Kidins220/ARMS binding to the B cell antigen receptor and its regulation of B cell development and activation.
Mouse / Not Cited	The Journal of experimental medicine (2015; 212: 1693) **"Kidins220/ARMS binds to the B cell antigen receptor and regulates B cell development and activation."** Author(s):Fiala GJ,Janowska I,Prutek F,Hobeika E,Satapathy A,Sprenger A,Plum T,Seidl M,Dengjel J,Reth M,Cesca F, Brummer T,Minguet S,Schamel WW PubMed Article URL:http://dx.doi.org/10.1084/jem.20141271
	17-0051 was used in Flow cytometry/Cell sorting to identify NFAT2 as a crucial regulator of the anergic phenotype in chronic lymphocytic leukaemia.
Mouse / 1:80	Nature communications (2017; 8:) **"NFAT2 is a critical regulator of the anergic phenotype in chronic lymphocytic leukaemia."** Author(s):Märklin M,Heitmann JS,Fuchs AR,Truckenmüller FM,Gutknecht M,Bugl S,Saur SJ,Lazarus J,Kohlhofer U, Quintanilla-Martinez L,Rammensee HG,Salih HR,Kopp HG,Haap M,Kirschniak A,Kanz L,Rao A,Wirths S,Müller MR PubMed Article URL:http://dx.doi.org/10.1038/s41467-017-00830-y

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