## CD19 Monoclonal Antibody (eBio1D3 (1D3)), PE, eBioscience™

**Catalog Number**: 12-0193-82

### Product data sheet

<table>
<thead>
<tr>
<th>Details</th>
<th>Species Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>100 µg</td>
</tr>
<tr>
<td><strong>Host/Isotope</strong></td>
<td>Rat / IgG2a, kappa</td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>Monoclonal</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Antibody</td>
</tr>
<tr>
<td><strong>Clone</strong></td>
<td>eBio1D3 (1D3)</td>
</tr>
<tr>
<td><strong>Conjugate</strong></td>
<td>PE</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td>0.2 mg/mL</td>
</tr>
<tr>
<td><strong>Purification</strong></td>
<td>Affinity chromatography</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>PBS, pH 7.2</td>
</tr>
<tr>
<td><strong>Contains</strong></td>
<td>0.09% sodium azide</td>
</tr>
<tr>
<td><strong>Storage Conditions</strong></td>
<td>4°C, store in dark, DO NOT FREEZE!</td>
</tr>
</tbody>
</table>

### Published Applications

<table>
<thead>
<tr>
<th>Tested Applications</th>
<th>Dilution *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cytometry (Flow)</td>
<td>0.125 µg/test</td>
</tr>
</tbody>
</table>

### Published Applications

| Flow Cytometry (Flow) | See 78 publications below |

### Species Reactivity

- **Species reaction**: Mouse
- **Published species**: Hamster, Mouse, Human, Not Applicable

### Tested Applications

- **Flow Cytometry (Flow)**: 0.125 µg/test

### Published Applications

- **Flow Cytometry (Flow)**: See 78 publications below

### Background/Target Information

CD19 is a member of the immunoglobulin superfamily and has two Ig-like domains. The CD19 molecule is expressed on 100% of the peripheral B cells as defined by expression of kappa or lambda light chains. CD19 appears to be expressed on myeloid leukemia cells, particularly those of monocytic lineage.

Leukemia phenotype studies have demonstrated that the earliest and broadest B cell restricted antigen is the CD19 antigen. The receptor for CD19 is an important functional regulator of normal and malignant B cell proliferation, and is expressed in all B cell precursor leukemias. Lymphocytes proliferate and differentiate in response to various concentrations of different antigens. The ability of the B cell to respond in a specific, yet sensitive manner to the various antigens is achieved with the use of low-affinity antigen receptors. CD19 is a cell surface molecule which assembles with the antigen receptor of B lymphocytes in order to decrease the threshold for antigen receptor-dependent stimulation. Besides being a signal-amplifying coreceptor for the B cell receptor (BCR), CD19 can also signal independently of BCR co-ligation and is a central regulatory component upon which multiple signaling pathways converge. Mutation of the CD19 gene results in hypogammaglobulinemia, whereas CD19 overexpression causes B cell hyperactivity.


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CD19 Antibody (12-0193-82) in Flow

Swiss Webster mouse splenocytes were stained with CD3ε Monoclonal Antibody, APC (Product # 17-0031-82) and 0.06 µg of Rat IgG2a kappa Isotype Control, PE (Product # 12-4321-83) (left) or 0.06 µg of CD19 Monoclonal Antibody, PE (right). Cells in the lymphocyte gate were used for analysis.
12-0193 was used in Flow cytometry/Cell sorting to investigate the contribution of NF-κB to IL-17 production by T cells, showing that RelA and RelB in distinct thymocyte populations control lymphotoxin-dependent IL-17 production.

Immunity (Mar 2011; 34: 364)
"RelA and RelB transcription factors in distinct thymocyte populations control lymphotoxin-dependent interleukin-17 production in T cells."
Author(s):Powolny-Budnicka I,Riemann M,Tänzer S,Schmid RM,Hehlgans T,Weih F
PubMed Article URL:http://dx.doi.org/10.1016/j.immuni.2011.02.019

12-0193 was used in Flow cytometry/Cell sorting to identify a critical regulatory circuit that tailors HSC responses to acute needs, and is likely to underlie deregulated blood homeostasis in chronic inflammation conditions.

Nature cell biology (Jun 2016; 18: 607)
"Chronic interleukin-1 exposure drives haematopoietic stem cells towards precocious myeloid differentiation at the expense of self-renewal."
PubMed Article URL:http://dx.doi.org/10.1038/rcb3346

12-0193 was used in Flow cytometry/Cell sorting to report several new t-AML/MDS mouse models that could potentially be used to further define disease pathogenesis and test novel therapeutics.

The Journal of experimental medicine (Jul 2012; 209: 1409)
"Thymus-autonomous T cell development in the absence of progenitor import."
Author(s):Martins VC,Ruggiero E,Schlenner SM,Madan V,Schmidt M,Fink PJ,von Kaile C,Rodewald HR
PubMed Article URL:http://dx.doi.org/10.1084/jem.20120846

12-0193 was used in Flow cytometry/Cell sorting to demonstrate the role of the Th2-promoting cytokine, IL-33, in cholangiocyte proliferation.

PloS one (Jul 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

12-0193 was used in Flow cytometry/Cell sorting to showcase the importance of the expression of a functional B-cell receptor for B cell maintenance.

The Journal of clinical investigation (Jul 2014; 124: 3241)
"Biliary repair and carcinogenesis are mediated by IL-33-dependent cholangiocyte proliferation."
PubMed Article URL:http://dx.doi.org/10.1172/JCI73742

12-0193 was used in Flow cytometry/Cell sorting to assess the importance of the expression of a functional B-cell receptor for B cell maintenance.

"Survival of Ig-Deficient Mature B Cells Requires BAFF-R Function."
PubMed Article URL:http://dx.doi.org/10.1084/jem.20120846

12-0193 was used in Flow cytometry/Cell sorting to identify a critical regulatory circuit that tailors HSC responses to acute needs, and is likely to underlie deregulated blood homeostasis in chronic inflammation conditions.

The Journal of clinical investigation (Nov 2011; 121: 4244)
"Th2 signals induce epithelial injury in mice and are compatible with the biliary atresia phenotype."
Author(s):Li J,Bessho K,Shivakumar P,Mourya R,Mohanthy SK,Dos Santos JL,Miura IK,Porta G,Bezerra JA
PubMed Article URL:http://dx.doi.org/10.1172/JCI57728
12-0193 was used in Flow cytometry/Cell sorting to study the role of HDAC9 in lymphomagenesis.

Mouse / Not Cited

Disease models & mechanisms (Dec 2016; 9: 1483)

"Deregulated expression of HDAC9 in B cells promotes development of lymphoproliferative disease and lymphoma in mice."


PubMed Article URL:http://dx.doi.org/10.1242/dmm.023366

12-0193 was used in Flow cytometry/Cell sorting to investigate the impairment of differentation of B cells and induction of pre-B cell acute lymphoblastic leukemia through the deletion of genes encoding PU.1 and Spi-1 in B cells.

Mouse / Not Cited

Blood (Sep 2011; 118: 2801)

"Deletion of genes encoding PU.1 and Spi-B in B cells impairs differentiation and induces pre-B cell acute lymphoblastic leukemia."

Author(s):Sokalski KM,Li SK,Welch I,Cadieux-Pitre HA,Grucha MR,DeKoter RP

PubMed Article URL:http://dx.doi.org/10.1182/blood-2011-02-335539

12-0193-82 was used in Flow cytometry/Cell sorting to determine a protocol for mouse skin isolation and immune cell isolation.

Mouse / Not Cited

STAR protocols (Sep 2021; 2:)

"Optimized protocol for immunophenotyping of melanoma and tumor-bearing skin from mouse."

Author(s):Krishna SS,Goncalves C,Gagnon N,Huang F,Piorode D,Miller WH,Fritz JH,Del Rincon SV

PubMed Article URL:http://dx.doi.org/10.1016/j.xpro.2021.100627

12-0193 was used in Flow cytometry to examine the effect of the IL-33/ST2 axis on GAS-induced necrotizing fasciitis.

Mouse / Not Cited

International journal of molecular sciences (Sep 2021; 22:)

"IL-33/ST2 Axis Plays a Protective Effect in Streptococcus pyogenes Infection through Strengthening of the Innate Immunity."

Author(s):Kuo CF,Chek WY,Yu HH,Tsai YH,Chang CY,Ching CP,Tsao N

PubMed Article URL:http://dx.doi.org/10.3390/ijms221910566

12-0193-82 was used in Flow cytometry/Cell sorting to determine a protocol for mouse skin isolation and immune cell isolation.

Mouse / Not Cited

Journal of immunology (Baltimore, Md. : 1950) (Apr 2010; 184: 3514)

"BTN1A1, the mammary gland butyrophilin, and BTN2A2 are both inhibitors of T cell activation."

Author(s):Smith IA,Knezevic BR,Ammann JU,Rhodes DA,Aw D,Palmer DB,Mather IH,Trowsdale J

PubMed Article URL:http://dx.doi.org/10.4049/jimmunol.0900416

12-0193 was used in Flow cytometry/Cell sorting to investigate the role of HDAC9 in lymphomagenesis.

Mouse / Not Cited

The Journal of experimental medicine (Dec 2016; 213: 2851)

"NLRP2 controls age-associated maternal fertility."

Author(s):Kuchmiy AA,D'Hont J,Hochepied T,Lamkanfi M

PubMed Article URL:http://dx.doi.org/10.1084/jem.20160900

12-0193 was used in Flow cytometry/Cell sorting to alter the tumor microenvironment using immunomodulatory cytokines for efficient T-cell therapy in solid tumors.

Mouse / Not Cited

PloS one (Apr 2016; 10:)

"Favorable alteration of tumor microenvironment by immunomodulatory cytokines for efficient T-cell therapy in solid tumors."

Author(s):Tähtinen S,Kaikkonen S,Merisalo-Solkkeli M,Grönberg-Vähä-Koskela S,Knerva A,Parviainen S,Vähä-Koskela M, Hemminki A

PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0131242
12-0193 was used in Flow cytometry/Cell sorting to investigate the interactions of insulin-specific T and B lymphocytes using T cell and B cell receptor transgenic mice.

Mouse / Not Cited

The Journal of experimental medicine (May 2016; 213: 967)
"Class-switched anti-insulin antibodies originate from unconventional antigen presentation in multiple lymphoid sites."

Author(s): Wan X, Thomas JW, Unanue ER
PubMed Article URL: http://dx.doi.org/10.1084/jem.20151869

12-0193 was used in Flow cytometry/Cell sorting to generate a mouse model expressing chimeric antigen receptors (CARs) specific for a tumour antigen under a pan-hematopoietic promoter.

Mouse / Not Cited

PloS one (Jun 2016; 10: )
"Expression of a Chimeric Antigen Receptor in Multiple Leukocyte Lineages in Transgenic Mice."

Author(s): Yong CS, Westwood JA, Schröder J, Papenfuss AT, von Scheidt B, Moeller M, Devaud C, Darcy PK, Kershaw MH
PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0140543

12-0193 was used in Flow cytometry/Cell sorting to examine the degree of benefit conferred by Treg cells during T. cruzi infection.

Mouse / Not Cited

BioMed research international (Nov 2013; 2013: )
"CD4+ CD25+ FOXP3+ Treg cells induced by rSSP4 derived from T. cruzi amastigotes increase parasitemia in an experimental Chagas disease model."

Author(s): Flores-Garcia Y, Rosales-Encina JL, Rosales-Garcia VH, Satoskar AR, Talamás-Rohana P
PubMed Article URL: http://dx.doi.org/10.1155/2013/632436

12-0193 was used in Flow cytometry/Cell sorting to indicate that enzymatic tissue disintegration can have profound effects on the expression of a variety of cell-surface molecules.

Mouse / Not Cited

European journal of microbiology & immunology (Jun 2012; 2: 112)
"Impact of enzymatic tissue disintegration on the level of surface molecule expression and immune cell function."

Author(s): Autengruber A, Gereke M, Hansen G, Hennig C, Bruder D
PubMed Article URL: http://dx.doi.org/10.1556/EuJMI.2.2012.2.3

12-0193 was used in Immunofluorescence to study how miR-150 can down-regulate mRNAs important for B cell function, and how it can block further B cell development when expressed prematurely.

Mouse / Not Cited

Proceedings of the National Academy of Sciences of the United States of America (Apr 2007; 104: 7080)
"miR-150, a microRNA expressed in mature B and T cells, blocks early B cell development when expressed prematurely."

Author(s): Zhou B, Wang S, Mayr C, Bartel DP, Lodish HF
PubMed Article URL: http://dx.doi.org/10.1073/pnas.0702409104

12-0193 was used in Flow cytometry/Cell sorting to study gene expression in microglia versus myeloid and other immune cells.

Mouse / Not Cited

Nature neuroscience (Jan 2014; 17: 131)
"Identification of a unique TGF--dependent molecular and functional signature in microglia."

PubMed Article URL: http://dx.doi.org/10.1038/nn.3599

12-0193 was used in Flow cytometry/Cell sorting to identify MLLT3 (also known as AF9) as a crucial regulator of HSCs that is highly enriched in human fetal, neonatal and adult HSCs, but downregulated in culture.

Human / 1:50

Nature (Dec 2019; 576: 281)
"MLLT3 governs human haematopoietic stem-cell self-renewal and engraftment."

PubMed Article URL: http://dx.doi.org/10.1038/s41586-019-1790-2

12-0193 was used in Flow cytometry/Cell sorting to study how miR-150 can down-regulate mRNAs important for B cell function, and how it can block further B cell development when expressed prematurely.

Mouse / Not Cited

"Notch dimerization and gene dosage are important for normal heart development, intestinal stem cell maintenance, and splenic marginal zone B-cell homeostasis during mite infestation."

PubMed Article URL: http://dx.doi.org/10.1371/journal.pbio.3000850
12-0193 was used in Flow cytometry/Cell sorting to provide evidence for how S-region transcripts interconvert between G4 and R-loop structures to promote IgH class switch recombination.

**Mouse / Not Cited**

Molecular cell (May 2018; 70: 650)

"RNA Helicase DDX1 Converts RNA G-Quadruplex Structures into R-Loops to Promote IgH Class Switch Recombination."

Author(s): Ribeiro de Almeida C, Dhir S, Dhir A, Moghaddam AE, Sattentau Q, Meinhart A, Proudfoot NJ

PubMed Article URL: http://dx.doi.org/10.1016/j.molcel.2018.04.001

12-0193 was used in Flow cytometry/Cell sorting to study how Th17 cells or their related cytokines could be considered to be a new therapeutic approach for non-Hodgkin B-cell lymphomas.

**Mouse / Not Cited**

PloS one (Feb 2012; 6: )

"Th17 Cells are involved in the local control of tumor progression in primary intraocular lymphoma."

Author(s): Galand C, Donou S, Crozet L, Brunet S, Touitou V, Ouakrim H, Fridman WH, Sauté-Fridman C, Fisson S

PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0024622

12-0193-82 was used in Flow Cytometry to investigate the effect of IGFBP2 on GBM exposed immune cells and its association with the mesenchymal induction, using a syngeneic mouse GBM model, human GBM samples, and cancer-immune cell co-culture experiments.

**Mouse / Not Cited**

PloS one (Apr 2020; 14: )

"IGFBP2 promotes immunosuppression associated with its mesenchymal induction and FcRIIB phosphorylation in glioblastoma."

Author(s): Liu Y, Song C, Shen F, Zhang J, Song SW

PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0222999

12-0193 was used in Flow cytometry/Cell sorting to investigate innate-like B cells within the skin.

**Mouse / Not Cited**


"IL-10+ Innate-like B Cells Are Part of the Skin Immune System and Require 41 Integrin To Migrate between the Peritoneum and Inflamed Skin."

Author(s): Geherin SA, Gómez D, Glabman RA, Ruthel G, Hamann A, Debes GF

PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1403246

12-0193 was used in Flow cytometry/Cell sorting to suggest that combined therapy is a promising strategy for prevention of GVHD with preservation of graft-versus-leukemia in allogenic HSCT.

**Mouse / Not Cited**

Journal of immunology (Baltimore, Md. : 1950) (Feb 2014; 192: 1928)

"Oral combined therapy with probiotics and allograft induces B cell-dependent long-lasting specific tolerance."

Author(s): Mercadante AC, Perobelli SM, Alves AP, Gonçalves-Silva T, Mello W, Gomes-Santos AC, Miyoshi A, Azevedo V, Faria AM, Bonomo A

PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1301034

12-0193 was used in Flow cytometry/Cell sorting to provide evidence that an immunometabolic crosstalk between islet-derived IL-33, ILC2s, and myeloid cells fosters insulin secretion.

**Mouse / Not Cited**

Immunity (Nov 2017; 47: 928)

"Interleukin-33-Activated Islet-Resident Innate Lymphoid Cells Promote Insulin Secretion through Myeloid Cell Retinoic Acid Production."


PubMed Article URL: http://dx.doi.org/10.1016/j.immuni.2017.10.015

12-0193 was used in Flow cytometry/Cell sorting to use mice lacking the recombination activating gene 1 (Rag-1) to study the role of T and B cells in sepsis after cecal ligation and puncture (CLP).

**Mouse / Not Cited**

Shock (Augusta, Ga.) (Oct 2011; 36: 396)

"The outcome of polymicrobial sepsis is independent of T and B cells."

Author(s): Bosmann M, Russkamp NF, Patel VR, Zetoune FS, Sarma JV, Ward PA

PubMed Article URL: http://dx.doi.org/10.1097/SHK.0b013e3182295f5f

12-0193 was used in Flow cytometry to study the role of the transcriptional repressor Snai3 protein in the derivation of cells of the haematopoietic system.

**Mouse / Not Cited**

European journal of immunology (Apr 2012; 42: 1038)

"Overexpression of Snai3 suppresses lymphoid- and enhances myeloid-cell differentiation."

Author(s): Dahlem T, Cho S, Spangrude GJ, Weis JJ, Weis JH

PubMed Article URL: http://dx.doi.org/10.1002/eji.201142193
12-0193 was used in Flow cytometry/Cell sorting to characterise an increased in vivo load of CD40-targeted Ag upon the secretion of the NP-CD40L fusion protein from adeno-virus-infected cells.

**Mouse / Not Cited**


"CD40 ligand preferentially modulates immune response and enhances protection against influenza virus."


PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1300093

12-0193 was used in Flow cytometry/Cell sorting to analyse in vivo norovirus cell tropism in orally inoculated, immunocompetent hosts at the peak of acute infection.

**Mouse / Not Cited**

Nature microbiology (Dec 2017; 2: 1586)

"The major targets of acute norovirus infection are immune cells in the gut-associated lymphoid tissue."


PubMed Article URL: http://dx.doi.org/10.1038/s41564-017-0057-7

12-0193 was used in Flow cytometry/Cell sorting to test the ability of Fbxo7 to transform haematopoietic pro-B cells.

**Mouse / 1:100**

Journal of cell science (Jul 2011; 124: 2175)

"Knockdown of Fbxo7 reveals its regulatory role in proliferation and differentiation of haematopoietic precursor cells."

Author(s): Meziane el K, Randle SJ, Nelson DE, Lomonosov M, Laman H

PubMed Article URL: http://dx.doi.org/10.1242/jcs.080465

12-0193 was used in Flow cytometry/Cell sorting to study the role of hypoxia in lung fibrosis.

**Mouse / Not Cited**

JCI insight (Aug 2018; 3: )

"Localized hypoxia links ER stress to lung fibrosis through induction of C/EBP homologous protein."

Author(s): Burman A, Kropski JA, Calvi CL, Serezani AP, Pascoalino BD, Han W, Sherrill T, Geaves L, Lawson WE, Young LR, Blackwell TS, Tanjore H

PubMed Article URL: http://dx.doi.org/10.1172/jci.insight.99543

12-0193 was used in Flow cytometry/Cell sorting to characterise the transient innate immune reaction to lentiviral vector, and evaluate a means for its prevention during LV-mediated gene transfer.

**Mouse / Not Cited**

Molecular therapy : the journal of the American Society of Gene Therapy (Dec 2012; 20: 2257)

"A TLR and non-TLR mediated innate response to lentiviruses restricts hepatocyte entry and can be ameliorated by pharmacological blockade."

Author(s): Agudo J, Rizo A, Kutir K, Sachidandanam R, Blander JM, Brown BD

PubMed Article URL: http://dx.doi.org/10.1038/mt.2012.150

12-0193-82 was used in Flow Cytometry to establish long-lived synovial resident memory T cells as a targetable mediator of disease chronicity in autoimmune arthritis.

**Mouse / Not Cited**

Cell reports (Oct 2021; 37: )

"Arthritis flares mediated by tissue-resident memory T cells in the joint."


PubMed Article URL: http://dx.doi.org/10.1016/j.celrep.2021.109902

12-0193 was used in Flow cytometry/Cell sorting to report that Foxn1 is expressed in wild-type BM and overexpressed in Foxn1Tg.

**Mouse / Not Cited**


"Enhancing T lineage production in aged mice: a novel function of Foxn1 in the bone marrow niche."

Author(s): Zook EC, Zhang S, Gerstein RM, Witte PL, Le PT

PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1202278

12-0193 was used in Flow cytometry/Cell sorting to show that IL4I1 blockade opens new avenues for cancer therapy.

**Mouse / Not Cited**

Cell (Sep 2020; 182: 1252)

"IL4I1 Is a Metabolic Immune Checkpoint that Activates the AHR and Promotes Tumor Progression."


PubMed Article URL: http://dx.doi.org/10.1016/j.cell.2020.07.038


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12-0193 was used in Flow cytometry/Cell sorting to study how nuocytes arose in the bone marrow and differentiated from common lymphoid progenitors, indicating they are a distinct, previously unknown member of the lymphoid lineage.

Mouse / Not Cited

Nature immunology (Jan 2012; 13: 229)
"Transmission factor ROR is critical for nuocyte development."
PubMed Article URL:http://dx.doi.org/10.1038/nm.2208

12-0193 was used in Flow cytometry/Cell sorting to demonstrate that inhibition of protein tyrosine phosphatase activity significantly attenuates cell sequestration within the brain and prevents the development of neuropathology.

Mouse / Not Cited

Scientific reports (Jul 2017; 7: )
"Protein Tyrosine Phosphatase Inhibition Prevents Experimental Cerebral Malaria by Precluding CXCR3 Expression on T Cells."
Author(s):Van Den Ham KM, Smith LK, Richer MJ, Olivier M
PubMed Article URL:http://dx.doi.org/10.1038/s41598-017-05609-1

12-0193-82 was used in Flow Cytometry to identify mutations in type II topoisomerase as a driver of defective proliferation and survival of B2 cells, leading to a B cell immunodeficiency.

Mouse / 1:400

"Mutations in topoisomerase II result in a B cell immunodeficiency."
PubMed Article URL:http://dx.doi.org/10.1038/s41467-019-11570-6

12-0193 was used in Flow cytometry/Cell sorting to assess the potential for the use of HS44 as a reagent for immune manipulation.

Mouse / Not Cited

Journal of immunology (Baltimore, Md. : 1950) (Dec 2010; 185: 7374)
"Regulation of follicular B cell differentiation by the related E26 transformation-specific transcription factors PU.1, Spi-B, and Spi-C."
PubMed Article URL:http://dx.doi.org/10.4049/jimmunol.1001413

12-0193 was used in Flow cytometry/Cell sorting to demonstrate the role of the E26 transformation-specific transcription factors PU.1, Spi-B, and Spi-C in follicular B cell development.

Mouse / Not Cited

"Structural and functional characterization of a novel nonglycosidic type I NKT agonist with immunomodulatory properties."
PubMed Article URL:http://dx.doi.org/10.4049/jimmunol.1103049

12-0193-82 was used in Flow cytometry/Cell sorting to understand the effects of age-related systemic factors on hematopoietic stem cells and their bone marrow niche.

Mouse / Not Cited

The Journal of experimental medicine (Jul 2021; 218: )
"Aged hematopoietic stem cells are refractory to bloodstream systemic rejuvenation interventions."
Author(s): Ho TT, Dellorusso PV, Verovskaya EV, Bakker ST, Flach J, Smith LE, Ventura PB, Lansinger OM, Herault A, Zhang SY, Kang YA, Mitchell CA, Villeda SA, Passégué E
PubMed Article URL:http://dx.doi.org/10.1084/jem.20210223

12-0193 was used in Flow cytometry/Cell sorting to study how nuocytes arose in the bone marrow and differentiated from common lymphoid progenitors, indicating they are a distinct, previously unknown member of the lymphoid lineage.

Mouse / Not Cited

Proceedings of the National Academy of Sciences of the United States of America (May 2016; 113: 5718)
"Peptidoglycan-linked protein A promotes T cell-dependent antibody expansion during Staphylococcus aureus infection."
Author(s): Kim HK, Falugi F, Missiakas DM, Schneewind O
PubMed Article URL:http://dx.doi.org/10.1073/pnas.1524267113
12-0193 was used in Flow cytometry/Cell sorting to demonstrate a method for the rapid/robust production of mast cells from pluripotent stem cells.

**Mouse / 1:200**

Stem cell reports (Oct 2018; 11: 1009)  
"Rapid Mast Cell Generation from Gata2 Reporter Pluripotent Stem Cells."  
PubMed Article URL: http://dx.doi.org/10.1016/j.stemcr.2018.08.007

12-0193 was used in Flow cytometry/Cell sorting to describe the in vivo riboprotumycylation method.

**Mouse / 1:150**

"Protein Translation Activity: A New Measure of Host Immune Cell Activation."  
Author(s): Seedhom MO, Hickman HD, Wei J, David A, Yewdell JW  
PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1600088

12-0193 was used in Flow cytometry/Cell sorting to define a critical role for the FL/IFN-Flt3 axis in plasmacytoid dendritic cell differentiation from common lymphoid progenitors.

**Mouse / Not Cited**

The Journal of experimental medicine (Nov 2013; 210: 2515)  
"A type I IFN-Flt3 ligand axis augments plasmacytoid dendritic cell development from common lymphoid progenitors."  
Author(s): Chen YL, Chen TT, Pai LM, Wesoly J, Bluysen HA, Lee CK  
PubMed Article URL: http://dx.doi.org/10.1084jem.20130536

12-0193 was used in Flow cytometry/Cell sorting to demonstrate that the clinical use of blocking CCL5 may induce other chemokine signals such as CXCL1-CXCR2 to induce further enhanced hepatic infiltration of neutrophils.

**Mouse / Not Cited**

Cellular and molecular gastroenterology and hepatology (Jun 2019; 7: 623)  
"Deletion of C-C Motif Chemokine Ligand 5 Worsens Invariant Natural Killer T-Cell-Mediated Hepatitis via Compensatory Up-regulation of CXC-Related Chemokine Activity."  
Author(s): Chen L, Gu J, Qian Y, Li M, Qian Y, Xu M, Li J, Wen Y, Xia Q, Lü J, Xia Q, Kong X, Wu H  
PubMed Article URL: http://dx.doi.org/10.1016/j.jcmgh.2018.12.009

12-0193 was used in Flow cytometry/Cell sorting to demonstrate that specific pharmacological targeting of a mitochondrial potassium channel can lead to reactive oxygen species-mediated selective apoptosis of cancer cells in vivo, without significant side effects.

**Mouse / 1:1,000**

Cancer cell (Apr 2017; 31: 516)  
"Direct Pharmacological Targeting of a Mitochondrial Ion Channel Selectively Kills Tumor Cells In Vivo."  
PubMed Article URL: http://dx.doi.org/10.1016/j.ccell.2017.03.003

12-0193-82 was used in Flow Cytometry to investigate regulation of cell cycle and germinal centres.

**Mouse / 1:200**

Nature communications (Dec 2021; 12: )  
"The concerted change in the distribution of cell cycle phases and zone composition in germinal centers is regulated by IL-21."  
Author(s): Zotos D, Ouat I, Wai-Suen CSN, McKenzie CI, Robinson MJ, Khan A, Smyth GK, Hodgkin PD, Tarlinton DM  
PubMed Article URL: http://dx.doi.org/10.1038/s41467-021-27477-0

12-0193 was used in Flow cytometry/Cell sorting to reveal that Fzd6 has an essential role in HSPC maintenance and survival.

**Mouse / Not Cited**

Journal of immunology (Baltimore, Md. : 1950) (Sep 2015; 195: 2168)  
"Fizzled-6 Regulates Hematopoietic Stem/Progenitor Cell Survival and Self-Renewal."  
Author(s): Abidin BM, Owusu Kwarteng E, Heinnenon KM  
PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1403213

12-0193 was used in Flow cytometry/Cell sorting to characterise a novel population of immune-specialised myofibroblasts derived from lymph node tissue, termed fibroblastic reticular cells.

**Mouse / Not Cited**

Science translational medicine (Aug 2014; 6: )  
"Lymph node fibroblastic reticular cell transplants show robust therapeutic efficacy in high-mortality murine sepsis."  
PubMed Article URL: http://dx.doi.org/10.1126/scitranslmed.3009377
12-0193 was used in Flow cytometry/Cell sorting to demonstrate the potential of combined CpG-ODN-LL-37 peptide treatment for the control of ovarian tumours.

**Human gene therapy (Apr 2009; 20: 303)**

"Treatment with LL-37 peptide enhances antitumor effects induced by CpG oligodeoxynucleotides against ovarian cancer."

Author(s): Chuang CM, Monie A, Wu A, Mao CP, Hung CF

PubMed Article URL: http://dx.doi.org/10.1089/hum.2008.124

12-0193 was used in Flow cytometry/Cell sorting to show that in leukaemia, GMP clusters are constantly produced due to lack of termination cytokines that restore haematopoietic stem-cell quiescence.

**Nature (Apr 2017; 544: 53)**

"Myeloid progenitor cluster formation drives emergency and leukaemic myelopoiesis."


PubMed Article URL: http://dx.doi.org/10.1038/nature21693

12-0193 was used in Flow cytometry/Cell sorting to provide novel insights into the mechanisms underlying the distinct features of p190Bcr-Abl CML and promising therapeutic targets for this high-risk patient group.

**Leukemia (Jul 2021; 35: 1964)**

"Characterization of p190-Bcr-Abl chronic myeloid leukemia reveals specific signaling pathways and therapeutic targets."


PubMed Article URL: http://dx.doi.org/10.1089/hum.2008.124

12-0193 was used in Flow cytometry/Cell sorting to study compensatory mechanisms in immune responses to viruses when classical T cell immunity has been evaded.

**Cell reports (Apr 2019; 27: 537)**

"Qa-1-Restricted CD8<sub>+</sub> T Cells Can Compensate for the Absence of Conventional T Cells during Viral Infection."

Author(s): Anderson CK, Reilly EC, Lee AY, Brossay L

PubMed Article URL: http://dx.doi.org/10.1016/j.celrep.2019.03.059

12-0193 was used in Flow cytometry/Cell sorting to demonstrate the usefulness of reconstituted IgM(b) superantigen hosts in revealing pathways involved in central tolerance.


"Negative selection by IgM superantigen defines a B cell central tolerance compartment and reveals mutations allowing escape."

Author(s): Duong BH, Ota T, Aoki-Ota M, Cooper AB, Alt-Azzouzene D, Vela JL, Gavin AL, Nemazee D

PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1102479

12-0193 was used in Flow cytometry/Cell sorting to analyse the expression of mBD14 in cultured mice fibrosarcoma tumour cells and its effect on tumour growth.


"Mouse -defensin 14 (Defb14) promotes tumor growth by inducing angiogenesis in a CCR6-dependent manner."

Author(s): Röhrf J, Huber B, Koehl GE, Geissler EK, Hehlgans T

PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1102442

12-0193 was used in Flow cytometry/Cell sorting to demonstrate the stimulatory effect of CD40L-overexpressing CAR T cells on innate and adaptive immune cells, and provide a rationale for using CD40L-overexpressing CAR T cells to improve immunotherapy responses.

**Nature communications (Dec 2020; 11: )**

"CD103<sup>+</sup> cDC1 and endogenous CD8<sub>+</sub> T cells are necessary for improved CD40L-overexpressing CAR T cell antitumor function."

Author(s): Kuhn NF, Lopez AV, Li X, Cai W, Daniyan AF, Brentjens RJ

PubMed Article URL: http://dx.doi.org/10.1038/s41467-020-19833-3
12-0193-82 was used in Flow Cytometry to study the efficacy and safety of intratumorally administered IL-2 coding adenoviruses in combination with lymphocyte therapy in Syrian hamsters bearing pancreatic tumours.

Hamster / Not Cited

International journal of cancer (Oct 2017; 141: 1458)
"Adenoviral production of interleukin-2 at the tumor site removes the need for systemic postconditioning in adoptive cell therapy."

Author(s): Santos JM, Havunen R, Siurala M, Cervera-Carrascon V, Tähtinen S, Sorsa S, Anttila M, Karell P, Kanerva A, Hemminki A
PubMed Article URL: http://dx.doi.org/10.1002/ijc.30839

12-0193 was used in Flow Cytometry/Cell sorting to study how the requirements for Runx1 in erythroid/myeloid progenitors and hematopoietic stem cell formation are temporally distinct.

Mouse / Not Cited

Development (Cambridge, England) (Sep 2013; 140: 3765)
"Distinct temporal requirements for Runx1 in hematopoietic progenitors and stem cells."

Author(s): Tober J, Yazguirre AD, Piwarkyz E, Speck NA
PubMed Article URL: http://dx.doi.org/10.1242/dev.094961

12-0193-82 was used in Flow Cytometry/Cell sorting to provide novel insights into meningeal immunity, which is a less studied aspect of neuroimmune interactions in Mecp2-mutated diseases, and offer an essential resource for comparative analyses and data exploration to better understand the functional role of meningeal immunity in RTT.

Mouse / Not Cited

Frontiers in immunology (Jan 2023; 13: )
"A single-cell atlas reveals the heterogeneity of meningeal immunity in a mouse model of Methyl CpG binding protein 2 deficiency."

PubMed Article URL: http://dx.doi.org/10.3389/fimmu.2022.1056447

12-0193 was used in Flow Cytometry/Cell sorting to study the mechanisms by which IL-6 regulates bone healing.

Mouse / Not Cited

The American journal of pathology (Feb 2018; 188: 474)
"Distinct Effects of IL-6 Classic and Trans-Signaling in Bone Fracture Healing."

PubMed Article URL: http://dx.doi.org/10.1016/j.ajpath.2017.10.011

12-0193 was used in Flow Cytometry/Cell sorting to examine whether Salmonella infection could be prevented by administration of dietary carbohydrates with different structures and digestibility profiles.

Mouse / Not Cited

BMC microbiology (Nov 2009; 9: )
"Some putative prebiotics increase the severity of Salmonella enterica serovar Typhimurium infection in mice."

Author(s): Petersen A, Heegaard PM, Pedersen AL, Andersen JB, Sørensen RB, Frekiaer H, Lahtinen SJ, Ouweland AC, Poulsen M, Licht TR
PubMed Article URL: http://dx.doi.org/10.1186/1471-2180-9-245

12-0193 was used in Flow Cytometry/Cell sorting to demonstrate how large studies of acute leukaemia patient-derived xenografts in mice may mimic human randomised clinical trials.

Cancer cell (Apr 2016; 29: 574)
"The Public Repository of Xenografts Enables Discovery and Randomized Phase II-like Trials in Mice."

PubMed Article URL: http://dx.doi.org/10.1016/j.ccell.2016.03.008

12-0193 was used in Flow Cytometry/Cell sorting to provide novel insights into meningeal immunity, which is a less studied aspect of neuroimmune interactions in Mecp2-mutated diseases, and offer an essential resource for comparative analyses and data exploration to better understand the functional role of meningeal immunity in RTT.

Mouse / Not Cited

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Author(s): Tober J, Yazguirre AD, Piwarkyz E, Speck NA
PubMed Article URL: http://dx.doi.org/10.1242/dev.094961

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PubMed Article URL: http://dx.doi.org/10.1186/1471-2180-9-245

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PubMed Article URL: http://dx.doi.org/10.1016/j.ccell.2016.03.008

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Autophagy (May 2022; 18: 971)
"Increased alveolar epithelial TRAF6 via autophagy-dependent TRIM37 degradation mediates particulate matter-induced lung metastasis."
PubMed Article URL:http://dx.doi.org/10.1080/15548627.2021.1965421

Immunobiology (Jan 2014; 219: 53)
"Generation of a novel Cr2 gene allele by homologous recombination that abrogates production of Cr2 but is sufficient for expression of C1r."
Author(s):Donius LR,Orlando CM,Weis JJ,Weis JH
PubMed Article URL:http://dx.doi.org/10.1016/j.imbio.2013.08.003

Particle and fibre toxicology (Apr 2017; 14: )
"In vivo quantification of quantum dot systemic transport in C57BL/6 hairless mice following skin application post-ultraviolet radiation."
Author(s):Jatana S,Palmer BC,Phelan SJ,Gelein R,DeLouise LA
PubMed Article URL:http://dx.doi.org/10.1186/s12989-017-0191-7

Clinical and vaccine immunology : CVI (Jul 2012; 19: 1005)
"Human papillomavirus immunization is associated with increased expression of different innate immune regulatory receptors."
Author(s):Colmenares V,Noyola DE,Monsivás-Urenda A,Salgado-Bustamante M,Estrada-Capetillo L,González-Amaro R,Baranda L
PubMed Article URL:http://dx.doi.org/10.1128/CVI.00043-12

Nature communications (Jul 2020; 11: )
"Requirements for the differentiation of innate T-bet<sup>+</sup>memory-phenotype CD4<sup>+</sup> T lymphocytes under steady state."
PubMed Article URL:http://dx.doi.org/10.1038/s41467-020-17136-1

Nature (Mar 2017; 543: 205)
"Autophagy maintains the metabolism and function of young and old stem cells."
Author(s):Ho TT,Warr MR,Adelman ER,Lansinger OM,Flach J,Verovskaya EV,Figueroa ME,Passegué E
PubMed Article URL:http://dx.doi.org/10.1038/nature21388

eLife (Feb 2022; 11: )
"Overriding impaired FPR chemotaxis signaling in diabetic neutrophil stimulates infection control in murine diabetic wound."
PubMed Article URL:http://dx.doi.org/10.7554/eLife.72071
12-0193 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.

Mouse / Not Cited

The American journal of pathology (Nov 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

12-0193 was used in Flow cytometry/Cell sorting to determine the beneficial effects of the transcription factor, Helios, for Treg maintenance, differentiation, and survival.

Mouse / Not Cited

Journal of immunology (Baltimore, Md.: 1950) (Jan 2016; 196: 144)
"Helios Controls a Limited Subset of Regulatory T Cell Functions."
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Mouse / Not Cited

12-0193 was used in Flow cytometry/Cell sorting to investigate the use of ER intrabodies to knock-down protein expression.

Mouse / Not Cited

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"Functional knock down of VCAM1 in mice mediated by endoplasmatic reticulum retained intrabodies."
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