

CD4 Monoclonal Antibody (RM4-5), Pacific Blue™

Catalog NumberMCD0428

Product data sheet

Details		Species Reactivity	
Size	1 mL	Species reactivity	Mouse
Host/Isotope	Rat / IgG2a	Published species	Mouse, Not Applicable
Class	Monoclonal	Tested Applications	Dilution *
Type	Antibody	Flow Cytometry (Flow)	Assay-dependent
Clone	RM4-5	Published Applications	
Immunogen	Mouse CD4	Flow Cytometry (Flow)	See 8 publications below
Conjugate	Pacific Blue™	Miscellaneous PubMed (Misc)	See 3 publications below
Form	Liquid	* 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.	
Concentration	0.1 mg/mL		
Purification	purified		
Storage buffer	PBS with 4mg/mL BSA		
Contains	0.1% sodium azide		
Storage Conditions	4° C		

Background/Target Information

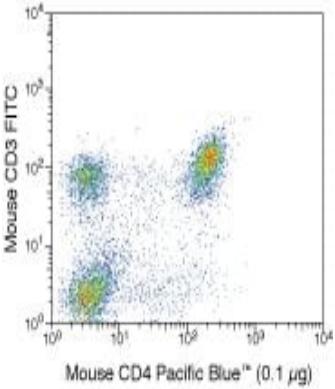
The CD4 antigen is involved in the recognition of MHC class II molecules and is a co-receptor for HIV. CD4 is primarily expressed in a subset of T-lymphocytes, also referred to as T helper cells, but may also be expressed by other cells in the immune system, such as monocytes, macrophages, and dendritic cells. At the tissue level, CD4 expression may be detected in thymus, lymph nodes, tonsils, and spleen, and also in specific regions of the brain, gut, and other non-lymphoid tissues. CD4 functions to initiate or augment the early phase of T-cell activation through its association with the T-cell receptor complex and protein tyrosine kinase, Lck. It may also function as an important mediator of direct neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcripts have been identified in this gene [RefSeq, July 2017].

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CD4 Antibody (MCD0428) in Flow
Flow Cytometry analysis using a CD4 monoclonal antibody (Product # MCD0428).

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PubMed References For CD4 Monoclonal Antibody (RM4-5), Pacific Blue™

8 Flow Cytometry References

Species / Dilution	Summary
	MCD0428 was used in flow cytometry to determine if HSPs ameliorate ischemic renal injury in vivo using HSF-1 KO mice
Mouse / Not Cited	Kidney international (2014; 86: 515) "Mice with an absent stress response are protected against ischemic renal injury." Author(s):Sreedharan R,Chen S,Miller M,Haribhai D,Williams CB,Van Why SK PubMed Article URL: http://dx.doi.org/10.1038/ki.2014.73
	MCD0428 was used in Flow cytometry/Cell sorting to investigate whether TLR9 has a role in the development of atherosclerosis in apolipoprotein E-deficient mice.
Mouse / Not Cited	Arteriosclerosis, thrombosis, and vascular biology (2014; 34: 516) "Protective role for Toll-like receptor-9 in the development of atherosclerosis in apolipoprotein E-deficient mice." Author(s):Koulis C,Chen YC,Hausding C,Ahrens I,Kyaw TS,Tay C,Allen T,Jandeleit-Dahm K,Sweet MJ,Akira S,Bobik A, Peter K,Agrotis A PubMed Article URL: http://dx.doi.org/10.1161/ATVBAHA.113.302407
	MCD0428 was used in flow cytometry to evaluate immunotherapeutic regimens in mice chronically infected with lymphocytic choriomeningitis virus
Mouse / Not Cited	Journal of virology (2009; 83: 8905) "Therapeutic memory T cells require costimulation for effective clearance of a persistent viral infection." Author(s):Garidou L,Heydari S,Truong P,Brooks DG,McGavern DB PubMed Article URL: http://dx.doi.org/10.1128/JVI.00027-09
	MCD0428 was used in Flow Cytometry to identify the role for CD8+ T cells in infection-associated cachexia.
Mouse / Not Cited	Nature immunology (2019; 20: 701) "CD8<sup>+</sup> T cells induce cachexia during chronic viral infection." Author(s):Baazim H,Schweiger M,Moschinger M,Xu H,Scherer T,Popa A,Gallage S,Ali A,Khamina K,Kosack L,Vilagós B, Smyth M,Lercher A,Friske J,Merkler D,Aderem A,Helbich TH,Heikenwälder M,Lang PA,Zechner R,Bergthaler A PubMed Article URL: http://dx.doi.org/10.1038/s41590-019-0397-y
	MCD0428 was used in flow cytometry to determine the importance of ligand-activated N3 in promoting beta-selection and N1 intracellular domain-induced T cell leukemogenesis
Not Applicable / Not Cited	PloS one (2012; 6:) "Notch3 is dispensable for thymocyte -selection and Notch1-induced T cell leukemogenesis." Author(s):Suliman S,Tan J,Xu K,Kousis PC,Kowalski PE,Chang G,Egan SE,Guidos C PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0024937
	MCD0428 was used in flow cytometry to identify T-cell epitopes of Francisella tularensis.
Mouse / Not Cited	Immunology (2011; 132: 348) "Identification of T-cell epitopes in Francisella tularensis using an ordered protein array of serological targets." Author(s):Valentino MD,Maben ZJ,Hensley LL,Woolard MD,Kawula TH,Frelinger JA,Frelinger JG PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2567.2010.03387.x
	MCD0428 was used in flow cytometry to develop an immunotherapy regimen that enables co-stimulation of TLR7/8- and CD40-mediated pathways.
Mouse / Not Cited	Advanced materials (Deerfield Beach, Fla.) (2022; 34:) "Nanomaterials-Mediated Co-Stimulation of Toll-Like Receptors and CD40 for Antitumor Immunity." Author(s):Yan J,Zhang Y,Du S,Hou X,Li W,Zeng C,Zhang C,Cheng J,Deng B,McComb DW,Zhao W,Xue Y,Kang DD, Cheng X,Dong Y PubMed Article URL: http://dx.doi.org/10.1002/adma.202207486
	MCD0428 was used in flow cytometry to identify Sox7 as a key regulator of haemogenic endothelial development.
Mouse / 1:100	Nature cell biology (2013; 15: 502) "The expression of Sox17 identifies and regulates haemogenic endothelium." Author(s):Clarke RL,Yzaguirre AD,Yashiro-Ohtani Y,Bondue A,Blanpain C,Pear WS,Speck NA,Keller G PubMed Article URL: http://dx.doi.org/10.1038/ncb2724

3 Miscellaneous PubMed References

Species / Dilution	Summary
	MCD0428 was used in flow cytometry to determine the role of granzyme B in immune regulation during viral infections.
Mouse / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2011; 187: 6301) "Granzyme B regulates antiviral CD8+ T cell responses." Author(s):Salti SM,Hammelev EM,Grewal JL,Reddy ST,Zemple SJ,Grossman WJ,Grayson MH,Verbsky JW PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1100891

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MCD0428 was used in flow cytometry to examine Treg cell control of chronic autoimmunity in a lymphoreplete host.

Mouse / Not Cited

Journal of immunology (Baltimore, Md. : 1950) (2013; 191: 5460)
"Chronic follicular bronchiolitis requires antigen-specific regulatory T cell control to prevent fatal disease progression."
Author(s):Schmitt EG,Haribhai D,Jeschke JC,Co DO,Ziegelbauer J,Yan K,Iwakura Y,Mishra MK,Simpson P,Salzman NH,Williams CB
PubMed Article URL:<http://dx.doi.org/10.4049/jimmunol.1301576>

Mouse / Not Cited

MCD0428 was used in flow cytometry to study the development of atherosclerosis in BAFF-R deficient ApoE(-/-) mice.

PloS one (2012; 7:)
"Depletion of B2 but not B1a B cells in BAFF receptor-deficient ApoE mice attenuates atherosclerosis by potently ameliorating arterial inflammation."
Author(s):Kyaw T,Tay C,Hosseini H,Kanellakis P,Gadowski T,MacKay F,Tipping P,Bobik A,Toh BH
PubMed Article URL:<http://dx.doi.org/10.1371/journal.pone.0029371>