

CD4 Monoclonal Antibody (W3/25)

Catalog Number

MA1-81588

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Rat
Host/Isotope	Mouse / IgG1	Published species	Rat, Not Applicable
Class	Monoclonal	Tested Applications	Dilution *
Type	Antibody	Flow Cytometry (Flow)	1:100-1:200
Clone	W3/25	Immunohistochemistry (Frozen) (IHC (F))	Assay-dependent
Immunogen	Rat Thymocyte Membrane Glycoproteins.	Immunohistochemistry (Paraffin) (IHC (P))	Assay-dependent
Conjugate	Unconjugated	Immunocytochemistry (ICC/IF)	Assay-dependent
Form	Liquid	Published Applications	
Concentration	1 mg/mL	Immunohistochemistry (IHC)	See 1 publications below
Purification	Protein A	Flow Cytometry (Flow)	See 6 publications below
Storage buffer	PBS, pH 7.4	Miscellaneous PubMed (Misc)	See 4 publications below
Contains	0.09% sodium azide	Neutralization (Neu)	See 1 publications below
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

* 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

PLP fixation is recommended for optimal tissue staining results. For FACS analysis, use 10 µL of the suggested working dilution to label 1x10⁶ cells in 100 µL. Mouse anti Rat CD4 antibody, clone W3/25 recognizes the rat CD4 cell surface glycoprotein, a approximately 55 kDa molecule expressed by helper T cells and weakly by monocytes.

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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PubMed References For CD4 Monoclonal Antibody (W3/25)

1 Immunohistochemistry References

Species / Dilution	Summary
	MA1-81588 was used in immunohistochemistry to find that magnetic activated cell sorting does not prevent transmission of leukemia when separating cancer cells from testicular cell samples in syngenic piebald variegated rats
Not Applicable / Not Cited	International journal of andrology (2009; 32: 66) "Immunomagnetic separation of normal rat testicular cells from Roser's T-cell leukaemia cells is ineffective." Author(s):Hou M,Andersson M,Zheng C,Sundblad A,Söder O,Jahnukainen K PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2605.2007.00819.x

6 Flow Cytometry References

Species / Dilution	Summary
	MA1-81588 was used in flow cytometry to examine the regulation of in vitro T-cell responses to enteric bacterial components
Not Applicable / Not Cited	Immunology (2005; 116: 112) "Dysregulated luminal bacterial antigen-specific T-cell responses and antigen-presenting cell function in HLA-B27 transgenic rats with chronic colitis." Author(s):Qian BF,Tonkonogy SL,Hoentjen F,Dieleman LA,Sartor RB PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2567.2005.02206.x
	MA1-81588 was used in flow cytometry to test if HLA-B27 expression on T cells is required for development of colitis
Not Applicable / Not Cited	Clinical and experimental immunology (2006; 143: 474) "Adoptive transfer of nontransgenic mesenteric lymph node cells induces colitis in athymic HLA-B27 transgenic nude rats." Author(s):Hoentjen F,Tonkonogy SL,Liu B,Sartor RB,Taurog JD,Dieleman LA PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2249.2006.03013.x
	MA1-81588 was used in flow cytometry to study rat T cell populations
Not Applicable / Not Cited	The Journal of experimental medicine (1978; 148: 664) "T-lymphocyte heterogeneity in the rat: separation of functional subpopulations using a monoclonal antibody." Author(s):White RA,Mason DW,Williams AF,Galfre G,Milstein C PubMed Article URL: http://dx.doi.org/10.1084/jem.148.3.664
	MA1-81588 was used in flow cytometry to study the innate immune responses to bacterial components using HLA-B27 transgenic rats
Not Applicable / Not Cited	Inflammatory bowel diseases (2008; 14: 1358) "Aberrant innate immune responses in TLR-ligand activated HLA-B27 transgenic rat cells." Author(s):Qian BF,Tonkonogy SL,Sartor RB PubMed Article URL: http://dx.doi.org/10.1002/ibd.20502
	MA1-81588 was used in flow cytometry to determine the role of T cells in the development of colitis in Bacteroides vulgatus-monoassociated HLA-B27 TG rats
Not Applicable / Not Cited	Inflammatory bowel diseases (2007; 13: 317) "CD4(+) T lymphocytes mediate colitis in HLA-B27 transgenic rats monoassociated with nonpathogenic Bacteroides vulgatus." Author(s):Hoentjen F,Tonkonogy SL,Qian BF,Liu B,Dieleman LA,Sartor RB PubMed Article URL: http://dx.doi.org/10.1002/ibd.20040
	MA1-81588 was used in flow cytometry to use transgenic rats to investigate host-dependent immune responses to commensal caecal bacteria
Not Applicable / Not Cited	Clinical and experimental immunology (2004; 136: 30) "Reduced ratio of protective versus proinflammatory cytokine responses to commensal bacteria in HLA-B27 transgenic rats." Author(s):Dieleman LA,Hoentjen F,Qian BF,Sprengers D,Tjwa E,Torres MF,Torrice CD,Sartor RB,Tonkonogy SL PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2249.2004.02410.x

4 Miscellaneous PubMed References

Species / Dilution	Summary
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	MA1-81588 was used in immunohistochemistry to study the effects of IL-4 using the HSV-tk/GCV system of glioma gene therapy.
Rat / 1:100	Human gene therapy (1997; 8: 1345) "Limited efficacy of the HSV-TK/GCV system for gene therapy of malignant gliomas and perspectives for the combined transduction of the interleukin-4 gene." Author(s):Benedetti S,Dimeco F,Pollo B,Cirenei N,Colombo BM,Bruzzzone MG,Cattaneo E,Vescovi A,Didonato S,Colombo MP,Finocchiaro G PubMed Article URL: http://dx.doi.org/10.1089/hum.1997.8.11-1345
	MA1-81588 was used in flow cytometry to investigate orthotopic liver transplantation using rats.
Rat / Not Cited	Transplantation (1998; 66: 132) "Persistence of donor-reactive CD4+ T cells in liver and spleen of rats tolerant to a liver allograft." Author(s):Olver S,Goto S,Chiba S,Clouston A,Kelso A PubMed Article URL: http://dx.doi.org/10.1097/00007890-199807150-00023
	MA1-81588 was used in flow cytometry to analyze cell surfaces using xenogeneic myeloma-hybrid antibodies
Not Applicable / Not Cited	Cell (1977; 12: 663) "Analysis of cell surfaces by xenogeneic myeloma-hybrid antibodies: differentiation antigens of rat lymphocytes." Author(s):Williams AF,Galfrè G,Milstein C PubMed Article URL: http://dx.doi.org/10.1016/0092-8674(77)90266-5
	MA1-81588 was used in immunohistochemistry to test if IL-4 can protect from malignant gliomas in vivo.
Rat / 1:100	Cancer research (1999; 59: 645) "Eradication of rat malignant gliomas by retroviral-mediated, in vivo delivery of the interleukin 4 gene." Author(s):Benedetti S,Bruzzzone MG,Pollo B,DiMeco F,Magrassi L,Pirola B,Cirenei N,Colombo MP,Finocchiaro G PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/9973213
1 Neutralization References	
Species / Dilution	Summary
	MA1-81588 was used in blocking or activating experiment to demonstrate that a monoclonal antibody specific for a subset of rat T lymphocytes inhibits the mixed lymphocyte response
Not Applicable / Not Cited	Nature (1980; 282: 841) "Inhibition of mixed lymphocyte response by monoclonal antibody specific for a rat T lymphocyte subset." Author(s):Webb M,Mason DW,Williams AF PubMed Article URL: http://dx.doi.org/10.1038/282841a0

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