

CD40 Monoclonal Antibody (3/23)

Catalog Number      MA1-81395

Product data sheet

Details		Species Reactivity	
Size	500 µg	Species reactivity	Mouse
Host/Isotope	Rat / IgG2a	Published species	Rat, Mouse, Not Applicable
Class	Monoclonal	Tested Applications	
Type	Antibody	ELISA (ELISA)	Assay-dependent
Clone	3/23	Flow Cytometry (Flow)	1:50
Immunogen	Extracellular domain of Murine CD40 and the Fc portion of Human IgG1.	Functional Assay (FN)	Assay-dependent
		Immunohistochemistry (Frozen) (IHC (F))	Assay-dependent
Conjugate	Unconjugated	Published Applications	
Form	Liquid	Flow Cytometry (Flow)	See 10 publications below
Concentration	1 mg/mL	Immunocytochemistry (ICC/IF)	See 1 publications below
Purification	Protein G	Miscellaneous PubMed (Misc)	See 3 publications below
Storage buffer	PBS, pH 7.4	Immunohistochemistry (IHC)	See 4 publications below
Contains	no preservative	* 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.	
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles		

Product specific information

This product is a low-endotoxin, preservative-free formulation. Endotoxin level is <0.01 EU/ug. For FACS analysis, use 10 µL of the suggested working dilution to label 1x10^6 cells in 100 µL. Rat anti Mouse CD40 antibody, clone 3/23 recognizes the murine CD40 cell surface glycoprotein.

Background/Target Information

The CD40 antigen is a single chain glycoprotein that is known to be a member of the tumor necrosis factor/nerve growth factor superfamily and shows a significant homology to the Hodgkin's disease associated antigen, CD30. CD40 is present on all B cells except plasma cells and is also found on some epithelial cells, carcinomas and lymphoid dendritic cells. CD40 has been found to be essential in mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. AT-hook transcription factor AKNA is reported to coordinately regulate the expression of CD40, which may be important for homotypic cell interactions. Adaptor protein TNFR2 interacts with CD40 and serves as a mediator of the signal transduction. The interaction of CD40 and its ligand is found to be necessary for amyloid-beta-induced microglial activation, and thus is thought to be an early event in Alzheimer disease pathogenesis. Two alternatively spliced transcript variants of CD40 encoding distinct isoforms have been reported. Diseases associated with CD40 dysfunction include Type 3 Hyper-Igm immunodeficiency and CD40 ligand deficiency.

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PubMed References For CD40 Monoclonal Antibody (3/23)

10 Flow Cytometry References

Species / Dilution	Summary
	<p>MA1-81395 was used in flow cytometry to investigate the effect of natural killer cells on apoptosis in a regressing histiocytoma</p>
Rat / Not Cited	<p>Immunology ( 1995; 85: 638)  <b>"Natural killer cell activation-associated induction of target cell DNA fragmentation in a spontaneously regressing rat histiocytoma."</b>                      Author(s):Bright JJ,Kausalya S,Khar A                      PubMed Article URL:<a href="http://www.ncbi.nlm.nih.gov/pubmed/7558160">http://www.ncbi.nlm.nih.gov/pubmed/7558160</a></p>
	<p>MA1-81395 was used in flow cytometry to investigate the cytotoxic functions of natural killer cells</p>
Rat / Not Cited	<p>Cancer immunology, immunotherapy : CII ( 2000; 49: 109)  <b>"Target-cell-induced anergy in natural killer cells: suppression of cytotoxic function."</b>                      Author(s):Das S,Varalakshmi C,Khar A                      PubMed Article URL:<a href="http://dx.doi.org/10.1007/s002620050609">http://dx.doi.org/10.1007/s002620050609</a></p>
	<p>MA1-81395 was used in flow cytometry to investigate the effect of interleukin 12 inhibition on tumor rejection</p>
Rat / Not Cited	<p>Immunology ( 1997; 92: 381)  <b>"Administration of anti-IL-12 antibody in vivo inhibits rejection of a rat histiocytoma and suppresses cytokine response in a tumour-bearing host."</b>                      Author(s):Rao KL,Varalakshmi C,Ali AM,Khar A                      PubMed Article URL:<a href="http://dx.doi.org/10.1046/j.1365-2567.1997.00362.x">http://dx.doi.org/10.1046/j.1365-2567.1997.00362.x</a></p>
	<p>MA1-81395 was used in flow cytometry to study the interaction of human papillomavirus 16 L1/E7 chimeric virus-like particles with mouse bone marrow-derived dendritic cells activated with different immune adjuvants</p>
Not Applicable / 1:50	<p>Antiviral therapy ( 2004; 9: 479)  <b>"Activation of dendritic cells and induction of T cell responses by HPV 16 L1/E7 chimeric virus-like particles are enhanced by CpG ODN or sorbitol."</b>                      Author(s):Freyschmidt EJ,Alonso A,Hartmann G,Gissmann L                      PubMed Article URL:<a href="http://www.ncbi.nlm.nih.gov/pubmed/15456078">http://www.ncbi.nlm.nih.gov/pubmed/15456078</a></p>
	<p>MA181395 was used in flow cytometry to study cancer-testis antigen expression in a mouse model of prostate cancer</p>
Mouse / Not Cited	<p>The Prostate ( 2017; 77: 361)  <b>"Role of Epigenetic Modification and Immunomodulation in a Murine Prostate Cancer Model."</b>                      Author(s):Sulek JE,Robinson SP,Petrosian AA,Zhou S,Goliadze E,Manjili MH,Toor A,Guruli G                      PubMed Article URL:<a href="http://dx.doi.org/10.1002/pros.23275">http://dx.doi.org/10.1002/pros.23275</a></p>
	<p>MA1-81395 was used in flow cytometry to test if eicosapentaenoic acid treatment alters the survival of fully mismatched murine cardiac allografts</p>
Not Applicable / Not Cited	<p>American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons ( 2009; 9: 1294)  <b>"Purified eicosapentaenoic acid induces prolonged survival of cardiac allografts and generates regulatory T cells."</b>                      Author(s):Iwami D,Zhang Q,Aramaki O,Nonomura K,Shirasugi N,Niimi M                      PubMed Article URL:<a href="http://dx.doi.org/10.1111/j.1600-6143.2009.02641.x">http://dx.doi.org/10.1111/j.1600-6143.2009.02641.x</a></p>
	<p>MA1-81395 was used in flow cytometry to clone and characterize Siglec-H</p>
Not Applicable / Not Cited	<p>Blood ( 2006; 107: 3600)  <b>"Characterization of Siglec-H as a novel endocytic receptor expressed on murine plasmacytoid dendritic cell precursors."</b>                      Author(s):Zhang J,Raper A,Sugita N,Hingorani R,Salio M,Palmowski MJ,Cerundolo V,Crocker PR                      PubMed Article URL:<a href="http://dx.doi.org/10.1182/blood-2005-09-3842">http://dx.doi.org/10.1182/blood-2005-09-3842</a></p>
	<p>MA1-81395 was used in flow cytometry to identify the ligand for the rat ortholog of human and mouse NKG2D</p>
Rat / Not Cited	<p>European journal of immunology ( 2006; 36: 107)  <b>"A transmembrane-anchored rat RAE-1-like transcript as a ligand for NKR-P2, the rat ortholog of human and mouse NKG2D."</b>                      Author(s):Savithri B,Khar A                      PubMed Article URL:<a href="http://dx.doi.org/10.1002/eji.200535350">http://dx.doi.org/10.1002/eji.200535350</a></p>

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	MA1-81395 was used in flow cytometry to investigate the changes of cytokine expression in NK cells after interacting with tumor cells
Rat / Not Cited	Cancer immunology, immunotherapy : CII ( 2001; 50: 428) <b>"Target cell induced activation of NK cells in vitro: cytokine production and enhancement of cytotoxic function."</b> Author(s):Das S,Varalakshmi C,Kumari AL,Patel M,Khar A PubMed Article URL: <a href="http://dx.doi.org/10.1007/s002620100217">http://dx.doi.org/10.1007/s002620100217</a>
	MA1-81395 was used in flow cytometry to investigate the role of interleukin 2 in the regulation of natural killer cell function
Rat / Not Cited	Scandinavian journal of immunology ( 2000; 52: 148) <b>"Interleukin-2-induced nitric oxide synthase and nuclear factor-kappaB activity in activated natural killer cells and the production of interferon-gamma."</b> Author(s):Jyothi MD,Khar A PubMed Article URL: <a href="http://dx.doi.org/10.1046/j.1365-3083.2000.00762.x">http://dx.doi.org/10.1046/j.1365-3083.2000.00762.x</a>
<b>1 Immunocytochemistry References</b>	
<b>Species / Dilution</b>	<b>Summary</b>
	MA1-81395 was used in immunocytochemistry to study the role of PAR activation in vivo to initiate MCP-dependent leukocyte recruitment
Rat / Not Cited	The Journal of experimental medicine ( 2008; 205: 1739) <b>"Protease-activated receptor 1 activation is necessary for monocyte chemoattractant protein 1-dependent leukocyte recruitment in vivo."</b> Author(s):Chen D,Carpenter A,Abrahams J,Chambers RC,Lechler RI,McVey JH,Dorling A PubMed Article URL: <a href="http://dx.doi.org/10.1084/jem.20071427">http://dx.doi.org/10.1084/jem.20071427</a>
<b>3 Miscellaneous PubMed References</b>	
<b>Species / Dilution</b>	<b>Summary</b>
	MA1-81395 was used in flow cytometry to assess the contribution of DC function in non-obese diabetic mice.
Mouse / Not Cited	Clinical and experimental immunology ( 2003; 134: 388) <b>"Passive transfer of flt-3L-derived dendritic cells delays diabetes development in NOD mice and associates with early production of interleukin (IL)-4 and IL-10 in the spleen of recipient mice."</b> Author(s):Morin J,Faideau B,Gagnerault MC,Lepault F,Boitard C,Boudaly S PubMed Article URL: <a href="http://dx.doi.org/10.1111/j.1365-2249.2003.02308.x">http://dx.doi.org/10.1111/j.1365-2249.2003.02308.x</a>
	MA1-81395 was used in flow cytometry to determine the immunoregulatory properties of primary colonic epithelial cells.
Mouse / Not Cited	Gastroenterology ( 2000; 119: 1548) <b>"Uptake and presentation of antigen to T cells by primary colonic epithelial cells in normal and diseased states."</b> Author(s):Telega GW,Baumgart DC,Carding SR PubMed Article URL: <a href="http://dx.doi.org/10.1053/gast.2000.20168">http://dx.doi.org/10.1053/gast.2000.20168</a>
	MA1-81395 was used in flow cytometry to examine the contribution of different DC subsets during infection with Cryptococcus neoformans.
Mouse / Not Cited	Journal of immunology (Baltimore, Md. : 1950) ( 2000; 165: 158) <b>"Dendritic cells in the induction of protective and nonprotective anticyptococcal cell-mediated immune responses."</b> Author(s):Bauman SK,Nichols KL,Murphy JW PubMed Article URL: <a href="http://dx.doi.org/10.4049/jimmunol.165.1.158">http://dx.doi.org/10.4049/jimmunol.165.1.158</a>
<b>4 Immunohistochemistry References</b>	
<b>Species / Dilution</b>	<b>Summary</b>
	MA1-81395 was used in immunohistochemistry to study the role of mitochondrial pathway in neutrophil survival modulated by IgE in asthma
Rat / Not Cited	Cancer research ( 1995; 55: 1499) <b>"Linomide inhibits angiogenesis, growth, metastasis, and macrophage infiltration within rat prostatic cancers."</b> Author(s):Vukanovic J,Isaacs JT PubMed Article URL: <a href="http://www.ncbi.nlm.nih.gov/pubmed/7533663">http://www.ncbi.nlm.nih.gov/pubmed/7533663</a>
	MA1-81395 was used in immunohistochemistry to investigate the effect of phospholipase A2 on glioma inhibition in vivo
Rat / Not Cited	Cancer letters ( 1996; 102: 1) <b>"Phospholipase A2-mediated inflammation induces regression of malignant gliomas."</b> Author(s):Goddard DH,Bomalaski JS,Lipper S,Shorr RG,Clark MA PubMed Article URL: <a href="http://dx.doi.org/10.1016/0304-3835(96)04142-0">http://dx.doi.org/10.1016/0304-3835(96)04142-0</a>

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	MA1-81395 was used in immunohistochemistry to study the mechanism for the suicide gene therapy of ovary tumors
Rat / Not Cited	<p>Biomedicine &amp; pharmacotherapy = Biomedecine &amp; pharmacotherapie ( 2000; 54: 479)</p> <p><b>"Efficient suicide gene therapy of transduced and distant untransduced ovary tumors is correlated with significant increase of intratumoral T and NK cells."</b></p> <p>Author(s):Nagy HJ,Panis Y,Fabre M,Engelmann C,Soubrane O,Houssin D,Klatzmann D</p> <p>PubMed Article URL:<a href="http://dx.doi.org/10.1016/s0753-3322(00)00008-1">http://dx.doi.org/10.1016/s0753-3322(00)00008-1</a></p>
Rat / 1:100	<p>MA1-81395 was used in immunohistochemistry to evaluate the interleukin 4 gene therapy of rat malignant gliomas</p> <p>Cancer research ( 1999; 59: 645)</p> <p><b>"Eradication of rat malignant gliomas by retroviral-mediated, in vivo delivery of the interleukin 4 gene."</b></p> <p>Author(s):Benedetti S,Bruzzzone MG,Pollo B,DiMeco F,Magrassi L,Pirola B,Cirenei N,Colombo MP,Finocchiaro G</p> <p>PubMed Article URL:<a href="http://www.ncbi.nlm.nih.gov/pubmed/9973213">http://www.ncbi.nlm.nih.gov/pubmed/9973213</a></p>

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