

Datasheet: MCA1853

Description:	MOUSE ANTI HUMAN CD163
Specificity:	CD163
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	EDHu-1
Isotype:	IgG1
Quantity:	0.2 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/10 - 1/50
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting	▪			
Immunofluorescence	▪			
Immunoassay	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Reacts with: Rhesus Monkey, Sheep, Pig, Guinea Pig, Bovine, Cynomolgus monkey
N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Leucocytes harvested from the pleural cavity of patients with idiopathic spontaneous pneumothorax
External Database Links	<p>UniProt: Q86VB7 Related reagents</p> <p>Entrez Gene: 9332 CD163 Related reagents</p>
Synonyms	M130
RRID	AB_2074540
Specificity	<p>Mouse anti Human CD163 antibody, clone EDHu-1 recognizes the human CD163 cell surface antigen, a 130-140 kDa glycoprotein expressed by tissue macrophages. CD163 expression may be induced on monocytes by culture in dexamethasone.</p> <p>Clone EDHu-1 is reported to inhibit the binding of haptoglobin/hemoglobin to CD163 (Madsen <i>et al.</i> 2004). Truncation mutation analysis demonstrates binding of EDHu-1 occurs via the N-terminal region of CD163 containing the first three scavenger receptor, Cysteine-rich, SRCR domains the third domain being critical as, cleavage of this domain at the major cleavage site ASP-265 abrogates binding to the N-terminal fragment.</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl
References	<ol style="list-style-type: none"> Kristiansen, M. <i>et al.</i> (2001) Identification of the haemoglobin scavenger receptor. Nature. 409 (6817): 198-201. Madsen, M. <i>et al.</i> (2004) Molecular characterization of the haptoglobin.hemoglobin receptor CD163. Ligand binding properties of the scavenger receptor cysteine-rich domain region. J Biol Chem. 279 (49): 51561-7. Kim, W.K. <i>et al.</i> (2006) CD163 identifies perivascular macrophages in normal and viral encephalitic brains and potential precursors to perivascular macrophages in blood. Am J Pathol. 168 (3): 822-34. Moreno JA <i>et al.</i> (2010) Peripheral artery disease is associated with a high CD163/TWEAK plasma ratio. Arterioscler Thromb Vasc Biol. 30 (6): 1253-62. Herrmann-Hoesing, L.M. (2010) Ovine progressive pneumonia virus capsid antigen as found in CD163- and CD172a-positive alveolar macrophages of persistently infected

- sheep. [Vet Pathol. 47: 518-28.](#)
6. Asleh, R. *et al.* (2003) Genetically determined heterogeneity in hemoglobin scavenging and susceptibility to diabetic cardiovascular disease. [Circ Res. 92: 1193-200.](#)
7. Fabriek, B.O. *et al.* (2007) The macrophage CD163 surface glycoprotein is an erythroblast adhesion receptor. [Blood 109: 5223-9.](#)
8. Jensen, T.O. *et al.* (2009) Macrophage markers in serum and tumor have prognostic impact in American Joint Committee on Cancer stage I/II melanoma. [J Clin Oncol. 27: 3330-7.](#)
9. Montes de Oca, M. *et al.* (2005) Skeletal muscle inflammation and nitric oxide in patients with COPD. [Eur Respir J. 26: 390-7.](#)
10. Martens JH *et al.* (2006) Differential expression of a gene signature for scavenger/lectin receptors by endothelial cells and macrophages in human lymph node sinuses, the primary sites of regional metastasis. [J Pathol. 208 \(4\): 574-89.](#)
11. Vinet-Oliphant, H. *et al.* (2010) Neurokinin-1 receptor (NK1-R) expression in the brains of SIV-infected rhesus macaques: implications for substance P in NK1-R immune cell trafficking into the CNS. [Am J Pathol. 177: 1286-97.](#)
12. Wang, X. *et al.* (2006) Monocyte/macrophage and T-cell infiltrates in peritoneum of patients with ovarian cancer or benign pelvic disease. [J Transl Med. 4: 30.](#)
13. Grund, S. *et al.* (2009) The microglial/macrophagic response at the tumour-brain border of invasive meningiomas. [Neuropathol Appl Neurobiol. 35: 82-8.](#)
14. Jorgensen, J.M. *et al.* (2009) Expression level, tissue distribution pattern, and prognostic impact of vascular endothelial growth factors VEGF and VEGF-C and their receptors Flt-1, KDR, and Flt-4 in different subtypes of non-Hodgkin lymphomas. [Leuk Lymphoma. 50: 1647-60.](#)
15. Moreno, J.A. *et al.* (2009) The CD163-expressing macrophages recognize and internalize TWEAK: potential consequences in atherosclerosis. [Atherosclerosis. 207: 103-10.](#)
16. Tang, Z. *et al.* (2013) Glucocorticoids Enhance CD163 Expression in Placental Hofbauer Cells. [Endocrinology 154: 471-82.](#)
17. Boyle, J.J. *et al.* (2009) Coronary intraplaque hemorrhage evokes a novel atheroprotective macrophage phenotype. [Am J Pathol. 174: 1097-108.](#)
18. Taus, N.S. *et al.* (2010) Sheep (*Ovis aries*) airway epithelial cells support ovine herpesvirus 2 lytic replication in vivo. [Vet Microbiol. 145: 47-53.](#)
19. Seeboth, J. *et al.* (2012) The fungal T-2 toxin alters the activation of primary macrophages induced by TLR-agonists resulting in a decrease of the inflammatory response in the pig. [Vet Res. 43: 35.](#)
20. Berglin, L. *et al.* (2014) *In situ* characterization of intrahepatic non-parenchymal cells in PSC reveals phenotypic patterns associated with disease severity. [PLoS One 9: e105375.](#)
21. Liu, J. *et al.* (2014) Evidence for mTOR pathway activation in a spectrum of epilepsy-associated pathologies. [Acta Neuropathol Commun. 2: 71.](#)
22. Baek, J.H. *et al.* (2014) Extracellular Hb enhances cardiac toxicity in endotoxemic guinea pigs: protective role of haptoglobin. [Toxins \(Basel\) 6: 1244-59.](#)
23. Micci, L. *et al.* (2014) CD4 depletion in SIV-infected macaques results in macrophage and microglia infection with rapid turnover of infected cells. [PLoS Pathog. 10: e1004467.](#)
24. Piriilä E *et al.* (2015) Macrophages modulate migration and invasion of human tongue squamous cell carcinoma. [PLoS One 10 \(3\): e0120895.](#)

25. Arranz-Solís D *et al.* (2016) Systemic and local immune responses in sheep after *Neospora caninum* experimental infection at early, mid and late gestation. [Vet Res. 47 \(1\): 2.](#)
26. Lakritz, J R. *et al.* (2016) α 4-Integrin Antibody Treatment Blocks Monocyte/Macrophage Traffic to, Vascular Cell Adhesion Molecule-1 Expression in, and Pathology of the Dorsal Root Ganglia in an SIV Macaque Model of HIV-Peripheral Neuropathy. [Am J Pathol. 186 \(7\): 1754-61.](#)
27. Fry, L.M. *et al.* (2016) East Coast Fever Caused by *Theileria parva* Is Characterized by Macrophage Activation Associated with Vasculitis and Respiratory Failure. [PLoS One 11 \(5\): e0156004.](#)
28. Schultz, N. *et al.* (2017) Amylin alters human brain pericyte viability and NG2 expression. [J Cereb Blood Flow Metab. 37 \(4\): 1470-82.](#)
29. Zhang, W. *et al.* (2013) Myeloid clusters are associated with a pro-metastatic environment and poor prognosis in smoking-related early stage non-small cell lung cancer. [PLoS One 8: e65121.](#)
30. Furukawa S *et al.* (2017) Interleukin-33 produced by M2 macrophages and other immune cells contributes to Th2 immune reaction of IgG4-related disease. [Sci Rep. 7: 42413.](#)
31. Farina, A. *et al.* (2017) Epstein-Barr virus lytic infection promotes activation of Toll-like receptor 8 innate immune response in systemic sclerosis monocytes. [Arthritis Res Ther. 19 \(1\): 39.](#)
32. Mallard, J. *et al.* (2017) A method for obtaining simian immunodeficiency virus RNA sequences from laser capture microdissected and immune captured CD68+ and CD163+ macrophages from frozen tissue sections of bone marrow and brain. [J Immunol Methods. 442: 59-63.](#)
33. Blair, T.C. *et al.* (2016) Immunopathology of Japanese macaque encephalomyelitis is similar to multiple sclerosis. [J Neuroimmunol. 291: 1-10.](#)
34. Zhu, C. *et al.* (2017) Activation of CECR1 in M2-like TAMs promotes paracrine stimulation-mediated glial tumor progression. [Neuro Oncol. 19 \(5\): 648-59.](#)
35. Derricott, H. *et al.* (2016) Characterizing Villitis of Unknown Etiology and Inflammation in Stillbirth. [Am J Pathol. 186 \(4\): 952-61.](#)
36. Wächter, C. *et al.* (2016) Loss of cerebellar neurons in the progression of lentiviral disease: effects of CNS-permeant antiretroviral therapy. [J Neuroinflammation. 13 \(1\): 272.](#)
37. Chen, J. *et al.* (2019) Generation of Pigs Resistant to Highly Pathogenic-Porcine Reproductive and Respiratory Syndrome Virus through Gene Editing of CD163. [Int J Biol Sci. 15 \(2\): 481-492.](#)
38. Palaiologou, E. *et al.* (2020) Human placental villi contain stromal macrovesicles associated with networks of stellate cells. [J Anat. 236 \(1\): 132-41.](#)
39. Kong, L.Q. *et al.* (2013) The clinical significance of the CD163+ and CD68+ macrophages in patients with hepatocellular carcinoma. [PLoS One. 8 \(3\): e59771.](#)
40. Zhao, S. *et al.* (2020) CD14⁺ monocytes and CD163⁺ macrophages correlate with the severity of liver fibrosis in patients with chronic hepatitis C [Experimental and Therapeutic Medicine. 20 \(6\): 1-1.](#)
41. Hayashi, K. *et al.* (2020) The Natural History of Spontaneously Occurred Endometriosis in Cynomolgus Monkeys by Monthly Follow-Up Laparoscopy for Two Years. [Tohoku J Exp Med. 251 \(4\): 241-53.](#)
42. Gonçalves, V.M. *et al.* (2021) Macrophage and Lymphocyte Infiltration Is Associated

- with Volumetric Tumor Size but Not with Volumetric Growth in the T&yml;bingen Schwannoma Cohort. [Cancers \(Basel\). 13 \(3\): 466.](#)
43. Pestronk, A. (2020) Chronic Graft Versus Host Myopathies: Noninflammatory, Multi-Tissue Pathology With Glycosylation Disorders. [J Neuropathol Exp Neurol. 79 \(1\): 102-12.](#)
44. Holsapple, J.S. *et al.* (2021) Low Intensity Shockwave Treatment Modulates Macrophage Functions Beneficial to Healing Chronic Wounds. [Int J Mol Sci. 22\(15\):7844.](#)
45. da Silva M.C.M. *et al.* (2021) Inhibition of CSF1R, a receptor involved in microglia viability, alters behavioral and molecular changes induced by cocaine. [Sci Rep. 11 \(1\): 15989.](#)
46. Frafjord, A. *et al.* (2020) Antibody combinations for optimized staining of macrophages in human lung tumours. [Scand J Immunol. 92 \(1\): e12889.](#)
47. Ma, H. *et al.* (2021) Structural comparison of CD163 SRCR5 from different species sheds some light on its involvement in porcine reproductive and respiratory syndrome virus-2 infection *in vitro.* [Vet Res. 52 \(1\): 97.](#)
48. Kemmerer, C.L. *et al.* (2021) Cerebrospinal fluid cytokine levels are associated with macrophage infiltration into tumor tissues of glioma patients [BMC Cancer. 21\(1\):1108.](#)
49. Lehmann, M. *et al.* (2021) New onset of mainly guttate psoriasis after COVID-19 vaccination: a case report. [J Eur Acad Dermatol Venereol. 35 \(11\): e752-e755.](#)
50. Baumann, D. *et al.* (2021) p38 MAPK signaling in M1 macrophages results in selective elimination of M2 macrophages by MEK inhibition. [J Immunother Cancer.9 \(7\): e002319.](#)
51. Ikezumi, Y. *et al.* (2021) Steroid treatment promotes an M2 anti-inflammatory macrophage phenotype in childhood lupus nephritis. [Pediatr Nephrol. 36 \(2\): 349-59.](#)
52. Eligini, S. *et al.* (2019) Biological profile of monocyte-derived macrophages in coronary heart disease patients: implications for plaque morphology. [Sci Rep. 9 \(1\): 8680.](#)
53. Edwards, J.H. *et al.* (2021) Integration and functional performance of a decellularised porcine superflexor tendon graft in an ovine model of anterior cruciate ligament reconstruction. [Biomaterials. 279: 121204.](#)
54. Ströbel, S. *et al.* (2021) A 3D primary human cell-based *in vitro* model of non-alcoholic steatohepatitis for efficacy testing of clinical drug candidates. [Sci Rep. 11 \(1\): 22765.](#)
55. Galea, I. *et al.* (2022) Iron Deposition in the Brain After Aneurysmal Subarachnoid Hemorrhage. [Stroke. 53 \(5\): 1633-42.](#)
56. Bartalska, K. *et al.* (2022) A systematic characterization of microglia-like cell occurrence during retinal organoid differentiation. [iScience. 25 \(7\): 104580.](#)
57. Pooley, H.B. *et al.* (2022) Sheep vaccinated against paratuberculosis have increased levels of B cells infiltrating the intestinal tissue. [Vet Immunol Immunopathol. 252: 110482.](#)
58. Vafaei, T. *et al.* (2022) Repopulation of decellularised porcine pulmonary valves in the right ventricular outflow tract of sheep: Role of macrophages. [J Tissue Eng. 13: 20417314221102680.](#)
59. Rabuffetti, A. *et al.* (2022) New onset of sarcoidosis after COVID-19 infection. [J Eur Acad Dermatol Venereol. 36 \(10\): e756-e759.](#)
60. Albrecht, E. *et al.* (2023) Identification and Quantification of Proliferating Cells in Skeletal Muscle of Glutamine Supplemented Low- and Normal-Birth-Weight Piglets [Cells. 12 \(4\): 580.](#)

Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee	12 months from date of despatch
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Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1853 10040
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight@488 , DyLight@550 , DyLight@650 , DyLight@680 , DyLight@800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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