



Datasheet: MCA1853SBB700

Description:	MOUSE ANTI HUMAN CD163:StarBright Blue 700
Specificity:	CD163
Format:	StarBright Blue 700
Product Type:	Monoclonal Antibody
Clone:	EDHu-1
Isotype:	IgG1
Quantity:	100 TESTS/0.5ml

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	▪			Neat

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 conjugated to StarBright Blue 700 - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright Blue 700	473	703

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

Buffer Solution Phosphate buffered saline

Preservative	0.09% Sodium Azide (NaN ₃)
Stabilisers	1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
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
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 5µl of the suggested working dilution to label 10 ⁶ cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
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. Asleh, R. <i>et al.</i> (2003) Genetically determined heterogeneity in hemoglobin scavenging and susceptibility to diabetic cardiovascular disease. Circ Res. 92: 1193-200. 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. Montes de Oca, M. <i>et al.</i> (2005) Skeletal muscle inflammation and nitric oxide in patients with COPD. Eur Respir J. 26: 390-7. Wang, X. <i>et al.</i> (2006) Monocyte/macrophage and T-cell infiltrates in peritoneum of patients with ovarian cancer or benign pelvic disease. J Transl Med. 4: 30. Martens JH <i>et al.</i> (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. 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.

8. Fabriek, B.O. *et al.* (2007) The macrophage CD163 surface glycoprotein is an erythroblast adhesion receptor. [Blood 109: 5223-9.](#)
9. 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.](#)
10. Grund, S. *et al.* (2009) The microglial/macrophagic response at the tumour-brain border of invasive meningiomas. [Neuropathol Appl Neurobiol. 35: 82-8.](#)
11. 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.](#)
12. Moreno, J.A. *et al.* (2009) The CD163-expressing macrophages recognize and internalize TWEAK: potential consequences in atherosclerosis. [Atherosclerosis. 207: 103-10.](#)
13. Boyle, J.J. *et al.* (2009) Coronary intraplaque hemorrhage evokes a novel atheroprotective macrophage phenotype. [Am J Pathol. 174: 1097-108.](#)
14. Moreno JA *et al.* (2010) Peripheral artery disease is associated with a high CD163/TWEAK plasma ratio. [Arterioscler Thromb Vasc Biol. 30 \(6\): 1253-62.](#)
15. 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.](#)
16. 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.](#)
17. 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.](#)
18. 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.](#)
19. 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.](#)
20. 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.](#)
21. Tang, Z. *et al.* (2013) Glucocorticoids Enhance CD163 Expression in Placental Hofbauer Cells. [Endocrinology 154: 471-82.](#)
22. 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.](#)
23. Liu, J. *et al.* (2014) Evidence for mTOR pathway activation in a spectrum of epilepsy-associated pathologies. [Acta Neuropathol Commun. 2: 71.](#)
24. Baek, J.H. *et al.* (2014) Extracellular Hb enhances cardiac toxicity in endotoxemic guinea pigs: protective role of haptoglobin. [Toxins \(Basel\) 6: 1244-59.](#)
25. 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.](#)
26. Piriilä E *et al.* (2015) Macrophages modulate migration and invasion of human tongue squamous cell carcinoma. [PLoS One 10 \(3\): e0120895.](#)

27. Blair, T.C. *et al.* (2016) Immunopathology of Japanese macaque encephalomyelitis is similar to multiple sclerosis. [J Neuroimmunol. 291: 1-10.](#)
28. 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.](#)
29. 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.](#)
30. 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.](#)
31. 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.](#)
32. Derricott, H. *et al.* (2016) Characterizing Villitis of Unknown Etiology and Inflammation in Stillbirth. [Am J Pathol. 186 \(4\): 952-61.](#)
33. 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.](#)
34. 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.](#)
35. 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.](#)
36. 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.](#)
37. Schultz, N. *et al.* (2017) Amylin alters human brain pericyte viability and NG2 expression. [J Cereb Blood Flow Metab. 37 \(4\): 1470-82.](#)
38. Boxberg, M. *et al.* (2018) PD-L1 and PD-1 and characterization of tumor-infiltrating lymphocytes in high grade sarcomas of soft tissue - prognostic implications and rationale for immunotherapy. [Oncoimmunology. 7 \(3\): e1389366.](#)
39. Waddell, L.A. *et al.* (2018) ADGRE1 (EMR1, F4/80) Is a Rapidly-Evolving Gene Expressed in Mammalian Monocyte-Macrophages. [Front Immunol. 9: 2246.](#)
40. 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.](#)
41. 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.](#)
42. 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.](#)
43. 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.](#)
44. Pestronk, A. (2020) Chronic Graft Versus Host Myopathies: Noninflammatory, Multi-

- Tissue Pathology With Glycosylation Disorders. [J Neuropathol Exp Neurol. 79 \(1\): 102-12.](#)
45. Palaiologou, E. *et al.* (2020) Human placental villi contain stromal macrovesicles associated with networks of stellate cells. [J Anat. 236 \(1\): 132-41.](#)
46. Frafjord, A. *et al.* (2020) Antibody combinations for optimized staining of macrophages in human lung tumours. [Scand J Immunol. 92 \(1\): e12889.](#)
47. 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.](#)
48. Ikezumi, Y. *et al.* (2021) Steroid treatment promotes an M2 anti-inflammatory macrophage phenotype in childhood lupus nephritis. [Pediatr Nephrol. 36 \(2\): 349-59.](#)
49. 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.](#)
50. 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.](#)
51. 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.](#)
52. Gonçalves, V.M. *et al.* (2021) Macrophage and Lymphocyte Infiltration Is Associated with Volumetric Tumor Size but Not with Volumetric Growth in the Tÿbingen Schwannoma Cohort. [Cancers \(Basel\). 13 \(3\): 466.](#)
53. 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.](#)
54. 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.](#)
55. 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.](#)
56. 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.](#)
57. Galea, I. *et al.* (2022) Iron Deposition in the Brain After Aneurysmal Subarachnoid Hemorrhage. [Stroke. 53 \(5\): 1633-42.](#)
58. Bartalska, K. *et al.* (2022) A systematic characterization of microglia-like cell occurrence during retinal organoid differentiation. [iScience. 25 \(7\): 104580.](#)
59. 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.](#)
60. Rabuffetti, A. *et al.* (2022) New onset of sarcoidosis after COVID-19 infection. [J Eur Acad Dermatol Venereol. 36 \(10\): e756-e759.](#)
61. Vafae, 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.](#)
62. 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.](#)
63. Park, S.M. *et al.* (2023) Seven-colour multiplex immunochemistry/immunofluorescence and whole slide imaging of frozen sections. [J Immunol Methods. 518: 113490.](#)
64. Wu, H. *et al.* (2023) Electrical stimulation of piezoelectric BaTiO₃ coated Ti6Al4V scaffolds promotes anti-inflammatory polarization of macrophages and bone repair via

- MAPK/JNK inhibition and OXPPOS activation. [Biomaterials. 293: 121990.](#)
65. Lin, C. *et al.* (2023) Macrophage-like rapid uptake and toxicity of tattoo ink in human monocytes. [Immunology. Nov 14 \[Epub ahead of print\].](#)
66. Gabutti, M. *et al.* (2023) Dimethyl Fumarate Used as an Effective Treatment for Granuloma Annulare Disseminatum: An Immunohistochemical Case Study. [Int J Mol Sci. 24 \(17\): 13355](#)
67. White, K.S. *et al.* (2023) Simian immunodeficiency virus-infected rhesus macaques with AIDS co-develop cardiovascular pathology and encephalitis. [Front Immunol. 14: 1240946.](#)
68. Medina, J.P. *et al.* (2023) MSC therapy ameliorates experimental gouty arthritis hinting an early COX-2 induction. [Front Immunol. 14: 1193179.](#)

Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA1853SBB700 20471
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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