Website: thermofisher.com
Customer Service (US): 1 800 955 6288 ext. 1
Technical Support (US): 1 800 955 6288 ext. 441
thermofisher.com/contactus

Performance guaranteed

CD163 Monoclonal Antibody (ED2)

Catalog Number MA5-16656

Product data sheet

Details	
Size	100 µg
Host/Isotope	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	ED2
Immunogen	Rat Spleen cell homogenate
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Protein A
Storage buffer	PBS
Contains	0.09% sodium azide
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

Species Reactivity	
Species reactivity	Rat
Published species	Rat, Not Applicable

Tested Applications	Dilution *
Flow Cytometry (Flow)	Assay-dependent
Immunohistochemistry (Frozen) (IHC (F))	1:50-1:100
Immunohistochemistry (Paraffin) (IHC (P))	Assay-dependent
Immunoprecipitation (IP)	Assay-dependent
Western Blot (WB)	Assay-dependent
Immunocytochemistry (ICC/IF)	Assay-dependent

Published Applications	
Immunohistochemistry (IHC)	See 2 publications below

* 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

This product requires protein digestion pre-treatment of paraffin sections using trypsin or pronase. A suggested positive control for immunohistochemical applications is liver. For FACS analysis, use 10 µL of the suggested working dilution to label 1x10^6 cells in 100 µL. Mouse anti Rat CD163, clone ED2 recognizes the rat ED2 cell surface glycoprotein (Dijkstra et al. 1985).

Background/Target Information

CD163 (M130 antigen, Ber-Mac3, Ki-M8, SM4) is a 130 kDa membrane glycoprotein, a member of the scavenger receptor cysteine-rich superfamily, and a receptor for the hemoglobin-haptoglobin complex. CD163 protects tissues from free hemoglobin-mediated oxidative damage, and may play a role in the uptake and recycling of iron, via endocytosis of hemoglobin/haptoglobin and subsequent breakdown of heme. CD163 is expressed exclusively on the cell surface of human monocytes and macrophages that evolve predominantly in the late phase of inflammation. Specifically, CD163 is present on all circulating monocytes and most tissue macrophages except those found in the mantle zone and germinal centers of lymphoid follicles, interdigitating reticulum cells and Langerhan's cells. CD163 is present on all CD14 positive monocytes, most CD64 positive monocytes, and shows higher expression on CD16 positive monocytes. CD163 is upregulated on mononuclear phagocytes by IL-10, IL-6 and dexamethasone. Lipopolysaccharide (LPS) and phorbol myristate acetate (PMA) both induce shedding of CD163 from the cell surface into plasma or cell supernatant. CD163 binds hemoglobin /haptoglobin complexes in a calcium-dependent and pH-dependent manner, and exhibits a higher affinity for complexes of hemoglobin and multimeric haptoglobin of HP1F phenotype than for complexes of hemoglobin and dimeric haptoglobin of HP1S phenotype. Further, CD163 also induces a cascade of intracellular signals that involves tyrosine kinase-dependent calcium mobilization, inositol triphosphate production and secretion of IL6 and CSF1.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

PubMed References For CD163 Monoclonal Antibody (ED2)

2 Immunohistochemistry References

Species / Dilution	Summary
Rat / Not Cited	MA5-16656 was used in immunohistochemistry to test if IL-4 can protect from malignant gliomas in vivo. 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,Bruzzone 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
Rat / 1:250	MA5-16656 was used in immunohistochemistry to study the effects of IL-4 using the HSV-tk/GCV system of glioma gene therapy. 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,Bruzzone 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

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA

thermofisher.com/contactus