abcam

ab314947

PE Anti-CD163 antibody [EPR19518]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR19518
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

Species	Mouse
Dilution info	1/50
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/50
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information CD163

Function	Acute phase-regulated receptor involved in clearance and endocytosis of hemoglobin/haptoglobin complexes by macrophages and may thereby protect tissues from free hemoglobin-mediated oxidative damage. May play a role in the uptake and recycling of iron, via endocytosis of hemoglobin/haptoglobin and subsequent breakdown of heme. Binds hemoglobin/haptoglobin complexes in a calcium-dependent and pH-dependent manner. Exhibits a higher affinity for complexes of hemoglobin and multimeric haptoglobin of HP*1F phenotype than for complexes of hemoglobin and dimeric haptoglobin of HP*1S phenotype. Induces a cascade of intracellular signals that involves tyrosine kinase-dependent calcium mobilization, inositol triphosphate production and secretion of IL6 and CSF1. Isoform 3 exhibits the higher capacity for ligand endocytosis and the more pronounced surface expression when expressed in cells. After shedding, the soluble form (sCD163) may play an anti-inflammatory role, and may be a valuable diagnostic parameter for monitoring macrophage activation in inflammatory conditions.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD163 known also as hemoglobin scavenger receptor is a membrane glycoprotein with a molecular weight of approximately 130 kDa. It is predominantly expressed by monocytes and macrophages which are types of immune cells. Located on the cell surface CD163 functions as a receptor that aids in the clearance of hemoglobin-haptoglobin complexes playing a critical role in maintaining iron homeostasis and protecting tissues from oxidative damage. CD163 is not limited to human cells only; researchers often study its function using animal models such as chimeric rodents and chimeric rats.
Biological function summary	CD163 participates in anti-inflammatory processes and is linked to immune modulation. It plays a pivotal role in the resolution of inflammation and promotes the removal of damaged cells and tissues. Through its involvement in the

	endocytic pathway CD163 interacts with various ligands facilitating interactions with other proteins. In the context of research CD163 functionality can be analyzed using techniques like CD163 IHC CD163 ELISA and CD163 stain in both human and mouse models.
Pathways	CD163 is integral to the inflammation and immune response pathways. It participates in the heme-oxygenase pathway which is essential in the breakdown of heme into biliverdin free iron and carbon monoxide. This pathway involvement is tightly linked with heme oxygenase-1 (HO-1) a cytoprotective enzyme that helps to mitigate inflammatory responses. The interaction with haptoglobin and related proteins provides further insight into its regulatory roles within the immune system.
Associated diseases and disorders	CD163 is associated with conditions like atherosclerosis and acute inflammation disorders. Its elevated levels indicate macrophage activation observed in chronic inflammations such as cardiovascular diseases. In atherosclerosis CD163 expression correlates with the uptake of oxidized LDL connecting it to progression of the disease. Additionally soluble CD163 levels serve as a biomarker in conditions like chronic liver disease where it is linked to macrophage activation and fibrosis. Within these disorders proteins like LDL and inflammatory cytokines are closely associated with CD163 function and regulation.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

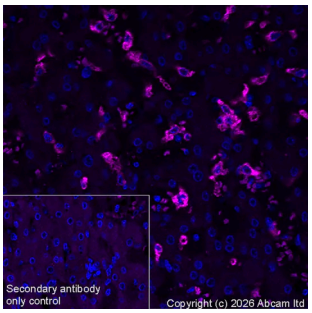
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

2 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - PE Anti-CD163 antibody [EPR19518] (ab314947)

CD163 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human Liver normal tissue using rabbit Anti-CD163 antibody

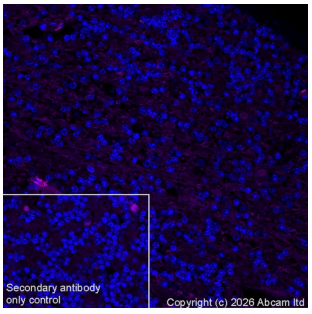
Immunofluorescence staining of CD163 staining in a section of formalin-fixed paraffin-embedded Human Liver normal (Positive tissue)*.

Performed on a Leica BOND. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH 9.0) using retrieval settings of 100°C for 40 minutes. The section was then incubated at room temperature for 1 hour with ab314947 at 1/50 dilution (shown in magenta). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Dako Fluorescence Mounting Medium ®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - PE Anti-CD163 antibody [EPR19518] (ab314947)

CD163 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human Cerebellum using rabbit Anti-CD163 antibody

Immunofluorescence staining of CD163 staining in a section of formalin-fixed paraffin-embedded Human Cerebellum normal (Negative tissue)*.

Performed on a Leica BOND. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH 9.0) using retrieval settings of 100°C for 40 minutes. The section was then incubated at room temperature for 1 hour with ab314947 at 1/50 dilution (shown in magenta). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Dako Fluorescence Mounting Medium ®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.