abcam

ab233653

PE/Cy7® Anti-CD163 antibody [GHI61]

Anti-CD163 antibody [GHI61] conjugated to PE/Cy7® - suitable for flow cytometry, and reacts with human samples. Clone [GHI61] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE/Cy7®
Excitation/Emission	Ex: 565nm, Em: 778nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD163 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q86VB7
Clone number	GHI61
Purification technique	Size-exclusion chromatography

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	4 µL for 10^6 Cells

Notes	-

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

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

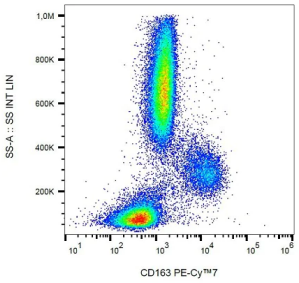
We do not recommend this combination. It is not covered by our product promise.

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:

1 product image



Flow Cytometry - PE/Cy7® Anti-CD163 antibody [GHI61] (ab233653)

CD163 Flow Cytometry staining using mouse Anti-CD163 antibody

Surface staining of human peripheral blood using ab233653.

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