CD163 Antibody [clone 32C14] (FY13266)

Catalog No.	Formulation	Size
FY13266	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32C14
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q86VB7
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200
Limitations	This CD163 antibody is available for research use only.

Description

CD163 antibody detects Cluster of Differentiation 163, encoded by the CD163 gene. CD163 is a scavenger receptor expressed primarily on monocytes and macrophages, where it mediates endocytosis of hemoglobin-haptoglobin complexes and regulates inflammatory responses. CD163 antibody provides researchers with a valuable tool to study macrophage biology, innate immunity, and inflammation.

Cluster of Differentiation 163 is a type I transmembrane glycoprotein belonging to the scavenger receptor cysteine rich superfamily. Research using CD163 antibody has shown that it binds hemoglobin-haptoglobin complexes with high affinity, promoting their clearance from circulation. This function prevents oxidative damage and inflammation caused by free hemoglobin. By regulating hemoglobin metabolism, CD163 protects tissues from injury following hemolysis.

Studies with CD163 antibody have revealed additional roles in immune regulation. CD163 functions as an anti-inflammatory receptor by triggering secretion of anti-inflammatory cytokines such as IL-10 upon ligand binding. Shedding of CD163 from the cell surface produces soluble CD163, which circulates in plasma and serves as a biomarker of macrophage activation and inflammation. Elevated soluble CD163 levels are observed in conditions such as sepsis, liver disease, and autoimmune disorders.

CD163 expression is tightly regulated by cytokines and environmental signals. Research using CD163 antibody has demonstrated that IL-6 and glucocorticoids induce expression, while pro-inflammatory stimuli such as lipopolysaccharide downregulate it. This dynamic regulation reflects the role of CD163 in resolving inflammation and restoring homeostasis.

In pathology, CD163 has emerged as a biomarker of tumor-associated macrophages. Studies with CD163 antibody have shown that high CD163 expression correlates with immunosuppressive macrophage populations in cancers, supporting tumor progression and poor prognosis. In cardiovascular disease, altered CD163 levels are linked to atherosclerosis and vascular inflammation. These findings underscore the importance of CD163 in both protective and pathological processes.

CD163 antibody is widely applied in flow cytometry, immunohistochemistry, and western blotting. Flow cytometry quantifies macrophage subsets, immunohistochemistry identifies tissue distribution, and western blotting confirms protein size and expression. These applications make CD163 antibody indispensable for immunology and translational research.

By providing validated CD163 antibody reagents, NSJ Bioreagents supports research into macrophage biology, hemoglobin metabolism, and inflammation. Detection of Cluster of Differentiation 163 enables exploration of macrophage activation states and disease biomarkers.

Application Notes

Optimal dilution of the CD163 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human CD163 was used as the immunogen for the CD163 antibody.

Storage

Store the CD163 antibody at -20oC.