Human CD163 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2977B
Catalog Number: MAB11579

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human CD163 in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2977B
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human CD163 Gly41-Ser1045 Accession # Q86VB7
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

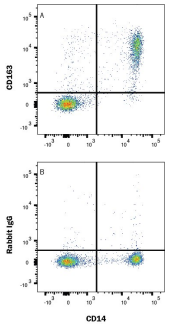
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	Human PBMC

DATA

Flow Cytometry



Detection of CD163 in CD14+ PBMC by Flow Cytometry
CD14+ PBMC were stained with either (A) Rabbit Anti-Human CD163 Monoclonal Antibody (Catalog # MAB11579) or (B) isotype control antibody (Catalog # AB-105-C) followed by Phycoerythrin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0110). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

CD163, previously called M130 or p155, is a 130-160 kDa type I transmembrane glycoprotein that belongs to group B of the cysteine-rich scavenger receptor family (1-3). It is essential for clearance of hemoglobin-haptoglobin (Hb-Hp) complexes in the liver, spleen and circulation (4). The human CD163 contains a 41 amino acid (aa) signal sequence, a 1009 aa extracellular domain (ECD) with 9 scavenger receptor cysteine-rich (SRCR) domains, a 22 aa transmembrane segment, and a 39-84 aa cytoplasmic region (1). The third SRCR domain is crucial for calcium-dependent binding of hemoglobin/haptoglobin complexes (3). Three splice forms (isoforms 2, 3 and 4) vary within their intracellular regions (1, 5), while one isoform (# 4) also has a 34 aa insert between SRCR domains 5 and 6 within the ECD. While all are expressed, isoform 3 is the most abundant, being generally expressed on the cell surface and most active in endocytosis (5). An approximately 130 kDa soluble form of human CD163 (sCD163) is assumed to contain virtually all of the ECD, which shares 74%, 75%, 84%, 86%, 86% and 87% aa identity with mouse, rat, bovine, equine, porcine and canine CD163 ECD, respectively (6, 7). It is released from the cell surface by proteolysis after oxidative stress or inflammatory stimuli, including bacterial endotoxins and activation of the Toll-like receptors TLR2 or TLR5 (7-10). Expression of CD163 is constitutive, and induced by glucocorticoids, IL-10, IL-6 or endotoxin on circulating monocytes, tissue macrophages, and at low levels on monocyte-derived dendritic cells (1, 2, 11, 12). In addition to clearing Hb-Hp complexes, CD163 is also a scavenger receptor for free Hb (if Hp is depleted) and TWEAK (TNF-like weak inducer of apoptosis), and can function as an erythroblast adhesion receptor (4, 13-15).

References:

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