Mouse CD163 Antibody

Monoclonal Rat IgG_{2B} Clone # 612722

Catalog Number: MAB7435

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD163 in direct ELISA.
Source	Monoclonal Rat IgG_{2B} Clone # 612722
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived recombinant mouse CD163 Val39-Thr1045 Accession # Q2VLH6
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

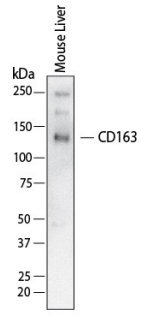
APPLICATIONS

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
Western Blot	2 µg/mL	Mouse liver
Immunocytochemistry	3-25 µg/mL	Formalin fixed Neuro2A cells (Positive)

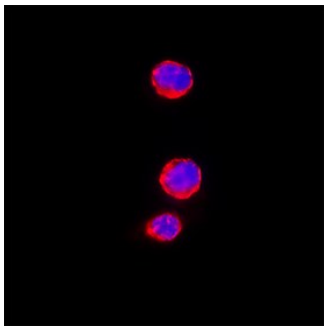
DATA

Western Blot



Detection of Mouse CD163 by Western Blot. Western Blot shows lysates of mouse liver. PVDF membrane was probed with 2 µg/ml of Rat Anti-Mouse CD163 Monoclonal Antibody (Catalog # MAB7435) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for CD163 at approximately 140 kDa (as indicated). This experiment was conducted under non-reducing conditions and using Western Blot Buffer Group 1.

Immunocytochemistry



Detection of CD163 in Neuro2A cells (Positive). CD163 was detected in formalin-fixed Neuro2A cells (Positive) using Rat Anti-Mouse CD163 Monoclonal Antibody (Catalog # MAB7435) at 8 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to the membrane. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it 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, also known as M130 and p155, is a 130-160 kDa type I transmembrane protein belonging to group B of the cysteine-rich scavenger receptor family (1). Mature mouse CD163 consists of a 1007 amino acid (aa) extracellular domain (ECD) with 9 scavenger receptor cysteine-rich (SRCR) domains, a 21 aa transmembrane segment, and a 55 aa cytoplasmic domain (2). Alternative splicing of mouse CD163 generates an isoform with a substitution in the cytoplasmic region. Within the ECD, mouse CD163 shares 75% and 90% aa sequence identity with human and rat CD163, respectively. CD163 is expressed on monocytes and macrophages and is inducible by immunosuppressant glucocorticoids and IL-10 (3-5). A soluble form is shed from the cell surface by TACE or neutrophil elastase mediated cleavage (6, 7) in response to oxidative stress, Prostaglandin F2a stimulation, or the activation of Fc gamma receptors, TLR1, 2, 5, or 6 (8-10). CD163 mediates monocyte binding to bacteria, leading to the release of inflammatory cytokines (11). It is essential for the circulatory clearance of hemoglobin-haptoglobin (Hb-Hp) complexes as well as free hemoglobin (12, 13). It can also mediate monocyte-erythroblast adhesion and promote erythroblast expansion (14). CD163 binds and internalizes the cytokine TWEAK, and the ratio of soluble CD163 to TWEAK in the plasma is elevated during atherosclerosis (15, 16).

References:

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