

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD83 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD83 Met22-Ala134 Accession # O88324
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Adhesion Blockade	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Mouse CD83 is a 30-35 kDa member of the Siglec (or sialic-acid-binding immunoglobulin-like lectin) family of transmembrane proteins (1, 2, 3). CD83 is synthesized as a type I transmembrane glycoprotein that contains a 114 amino acid (aa) extracellular region, a 22 aa transmembrane segment, and a 39 aa cytoplasmic domain. It contains one V type Ig-like domain in the extracellular region with no inhibitory cytoplasmic motif(s). In the extracellular region, mouse and human CD83 are 66% aa identical (1, 2, 4). Relative to mouse, human CD83 has an 11 aa insertion in its extracellular domain and is expressed as a 45-55 kDa protein (1, 4, 5, 6). No alternate splice variants have been reported for mouse. In human, however, one soluble splice form has been reported and proteolytic processing is suggested to generate a second circulating isoform (6, 7). Notably, although soluble CD83 has the potential to exist as either a monomer or disulfide-linked dimer, both show immunosuppressive activity (4, 8, 9). Membrane CD83, by contrast, is immunostimulatory (10). CD83 is a primary marker for dendritic cells (3, 5, 6). It is also found on B cells (6, 11), neutrophils (12), monocytes and macrophages (13). Except for dendritic cells, CD83 expression is often transient. CD83 binds to sialic acids on monocytes (3). The function of CD83 is only now becoming clear. As noted, membrane-immobilized CD83 appears to promote T cell proliferation, particularly of CD8⁺ cytotoxic T cells (14). On monocytes, CD83 may also drive monocytes into a fibrocyte phenotype (14). And a lack of membrane-expressed CD83 leads to an unusual IL-4/IL-10 producing CD4⁺ T cell phenotype (15).

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