

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD83 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant mouse CD83 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD83 Thr20-Ala143 Accession # Q01151
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.
Flow Cytometry	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

Human CD83 is a 40 - 50 kDa member of the Siglec (or sialic-acid-binding immunoglobulin-like lectin) family of transmembrane proteins (1-3). CD83 is synthesized as a type I transmembrane glycoprotein that contains a 125 amino acid (aa) extracellular region, a 22 aa transmembrane segment, and 39 aa cytoplasmic domain. It contains one V type Ig-like domain in the extracellular region with no inhibitory cytoplasmic motif(s). Although *in vitro* studies suggest CD83 may form membrane-bound covalent homodimers, *in vivo* this does not appear to be the case (1, 4). In the extracellular region, mouse and human CD83 are 66% aa identical (1, 2, 4, 5). Relative to human, mouse CD83 is 11 aa shorter in its extracellular domain and is expressed as a 30-35 kDa protein (1, 4, 5). Human CD83 is active in the mouse system (4). One alternate splice form has been reported. This leads to a small monomeric soluble form of 74 aa that includes aa's 20-52 and 164-205 (6, 7). In human, proteolytic cleavage and solubilization of CD83 has also been suggested, and this could lead to dimeric circulating CD83 (4, 6). CD83 is a primary marker for dendritic cells (3, 6, 8). It is also found on B cells (6, 9), neutrophils (10), monocytes, and macrophages (11). Except for dendritic cells, CD83 expression is often transient. CD83 binds to sialic acids on target cells (12). The function of CD83 is only now becoming clear. Membrane CD83 appears to promote T cell proliferation, particularly of CD8⁺ cytotoxic T cells (13, 14). Soluble CD83, however, appears to be immunosuppressive and blocks T cell activation (15, 16). On monocytes, CD83 is suggested to drive monocytes into a fibrocyte phenotype (13). A lack of membrane-expressed CD83 leads to an unusual IL-4/IL-10 producing CD4⁺ T cell phenotype (17).

PRODUCT SPECIFIC NOTICES

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