Mouse CD83 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1437

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
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

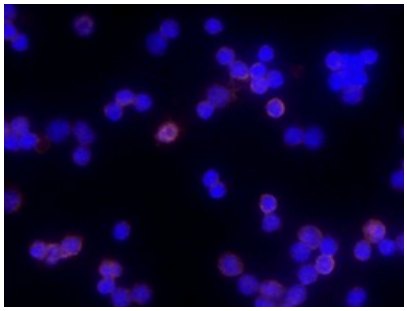
APPLICATIONS

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	0.1 µg/mL	Recombinant Mouse CD83 Fc Chimera (Catalog # 1437-CD)
Flow Cytometry	2.5 µg/10^6 cells	LPS-treated mature mouse dendritic cells
Immunocytochemistry	5-15 µg/mL	See Below
Adhesion Blockade	The adhesion of human monocyte-derived dendritic cells (5 x 10^4 cells/well) to immobilized Recombinant Mouse CD83 Fc Chimera (Catalog # 1437-CD, 2.5 µg/mL, 100 µL/well) was maximally inhibited (80-100%) by 40 µg/mL of the antibody.	

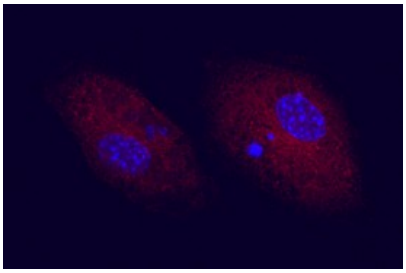
DATA

Immunocytochemistry



CD83 in Mouse Splenocytes. CD83 was detected in immersion fixed mouse splenocytes using 10 µg/mL Goat Anti-Mouse CD83 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1437) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunocytochemistry



CD83 in Mouse Dendritic Cells. CD83 was detected in immersion fixed LPS-stimulated mouse dendritic cells using Goat Anti-Mouse CD83 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1437) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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 from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

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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).

References:

1. Berchtold, S. *et. al.* (1999) FEBS Lett. **461**:211.
2. Fujimoto, Y. and T.F. Tedder (2006) J. Med. Dent. Sci. **53**:85.
3. Scholler, N. *et. al.* (2001) J. Immunol. **166**:3865.
4. Lechmann, M. *et al.* (2005) Biochem. Biophys. Res. Commun. **329**:132.
5. Zhou, L-J. *et. al.* (1992) J. Immunol. **149**:735.
6. Hock, B.D. *et al.* (2001) Int. Immunol. **13**:959.
7. Dudziak, D. *et al.* (2005) J. Immunol. **174**:6672.
8. Kotzor, N. *et al.* (2004) Immunobiology **209**:129.
9. Zinser, E. *et al.* (2006) Immunobiology **21**:449.
10. Hirano, N. *et al.* (2006) Blood **107**:1528.
11. Cramer, S.O. *et al.* (2000) Int. Immunol. **12**:1347.
12. Yamashiro, S. *et al.* (2000) Blood **96**:3958.
13. Cao, W. *et al.* (2005) Biochem. J. **385**:85.
14. Scholler, N. *et al.* (2002) J. Immunol. **168**:2599.
15. Garcia-Martinez, L.F. *et al.* (2004) J. Immunol. **173**:2995.

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