CD36

CD36 is a highly conserved, multifunctional 88,000 MW membrane protein expressed on macrophages, platelets, microvascular endothelial cells, dendritic cells, specialized epithelium of the breast and retina, skeletal and cardiac muscle, adipocytes and some tumors (glioma,breast cancer, and others). It has been implicated in the pathogenesis of atherosclerosis by virtue of its function as a type B scavenger receptor for oxidized lipoproteins. It also serves as a cellular receptor for apoptotic cells and photoreceptor outer segments, and may thus play a role in inflammation, antigen presentation, and retinal degeneration. As a receptor for thrombospondin-1 (TSP-1) it functions as an inhibitor of angiogenesis. It can also function as an endothelial cell adhesion molecule, and may mediate vascular pathology in sickle cell disease and malaria. CD36 expression is regulated by the nuclear receptor, PPAR-gamma, and functions as a binding site and possible transporter of long chain fatty acids. As such it has been proposed to play a role in cardiac energy metabolism,heart failure,insulin resistance, and perhaps obesity. This is the first available monoclonal antibody developed specifically to interact with murine CD36 and is thus suitable for study of this protein in murine and rat models.

Febbraio, M., Hajjar, D.P., and R.L. Silverstein. (2001) CD36: A Class B Scavenger Receptor involved in angiogenesis, atherosclerosis, inflammation and lipid metabolism. J. Clin. Invest. (In press)

Dawson, D.W., Pearce, S.F.A., Zhong R., Silverstein, R.L., Frazier, W.A., and N.P. Bouck. (1997) CD36 Mediates the Inhibitory Effects of Thrombospondin-1 on Endothelial Cells. J. Cell Biology 138: 707-717

Febbraio, M., Abumrad, N.A., Hajjar, D.P., Sharma, K., Cheng W., Pearce, S.F.A., and R.L. Silverstein. (1999) A null mutation in murine CD36 reveals an inportant role in fatty acid and lipoprotein metabolism. J. Biol. Chem 274:19055-19062

Silverstein, R. L. and M. Febbraio. (2000) CD36 and Atherosclerosis. Current Opinions in Lipidology. 11:483-491

Anti-Murine **CD36** (clone 63)

...the first murine-reactive anti-CD36

Research Applications

Immunoprecipitation:	1:1000 dilution
Flow Cytometry:	1:1000 dilution
Immunofluorescence:	1:1000 dilution
Functional Studies:	recommended

Product Description

Host / Ig Type:	mouse monoclonal IgA
Purification:	protein L purification
Immunogen:	full-length adenovirus vector injected into CD36 null mice
Reactivity:	mouse and rat, others possible
Storage:	-20˚C
Stability:	1 year

Production Control Information

Catalog Number: ABM-5525
Mass: 100 µg
Label Sample:

CASCADE BioScience

Anti-Murine CD36

Mouse Monoclonal IgA | Catalog #ABM-5525
Clone 63 | 100 µg
purified IgA | Storage: -20˚C

For Research Use Only

Cascade BioScience
37 Pierrepont Road • Winchester, MA 01890 • 781-721-4758
www.cascadebioscience.com

Pricing

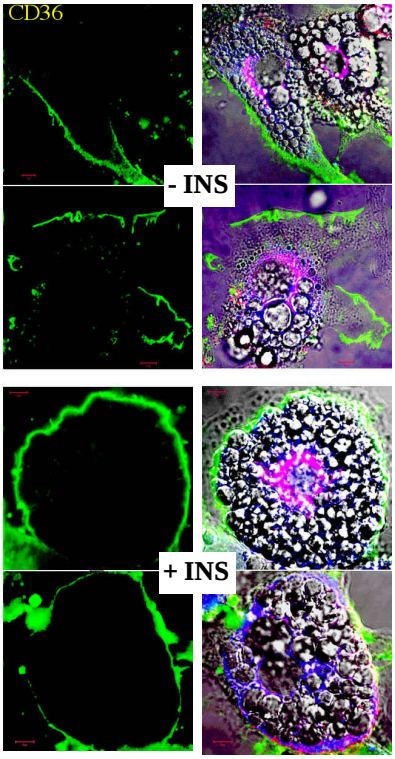
100 µg / $295

CASCADE BioScience

Winchester, Massachusetts 01890
(781) 721-4758
www.cascadebioscience.com

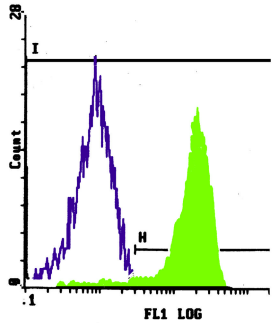
LOT SPECIFICATION

Quality Control Analyses



Immunofluorescence:

Murine insulin treated or untreated adipocytes fixed with acetone were incubated with murine anti-mouse CD36 antibody (1:100 dilution of supernatent), followed by FITC-conjugated IgA-specific secondary antibody. Confocal microscopy revealed prominent membrane staining (left panels). Phase contrast images are shown in the right panels.



Flow Cytometry:

Elicited mouse peritoneal macrophages were incubated with murine anti-mouse CD36 antibody (1:100 dilution of supernatent) or an isotype control (IgA), followed by FITC-conjugated IgA specific secondary antibody, and then analyzed by flow cytometry. The shaded peak shows high level expression of CD36.

Functional Studies:

Antibody blocked uptake of oxidized LDL by murine macrophages and prevented foam cell formation in vitro. Antibody blocked oxidized LDL-dependent activation of macrophage JNK kinase.