

PRODUCT INFORMATION

Scavenger Receptor B2/CD36 Monoclonal Antibody (Clone JC63.1) (Low Endotoxin)

Item No. 10009893

Overview and Properties

Contents:	This vial contains 100 µg or 500 µg of purified IgA.
Synonyms:	GPIIb, GPIV, Platelet Glycoprotein 4, Fatty Acid Translocase, PAS IV, Platelet Collagen Receptor, Thrombospondin Receptor
Immunogen:	Recombinant full-length mouse CD36 expressed in adenovirus
Species Reactivity:	(+) Human, mouse, rat; other species not tested
Cross Reactivity:	(+) CD36
Uniprot No.:	Q08857
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.2
Clone:	JC63.1
Host:	CD36 null mouse
Isotype:	IgA
Applications:	Flow cytometry (FC) and immunocytochemistry (ICC); the recommended starting concentration for FC and ICC is 0.5 µg/ml. For functional blocking, a concentration of 2 µg/ml inhibits CD36 binding of oxLDL (macrophages) and prevents foam cell formation of macrophages. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Description

CD36, also known as scavenger receptor B2 or fatty acid translocase, is a transmembrane glycoprotein that has roles in fatty acid uptake and lipid metabolism and signaling.¹ It is composed of N- and C-terminal cytoplasmic tails, two transmembrane domains, and an extracellular loop that binds to a variety of lipid ligands, including long-chain fatty acids, oxidized LDL, and oxidized phospholipids, and protein ligands, such as thrombospondin (TSP-1), and is subject to post-translational modifications.¹⁻³ CD36 is expressed by a variety of cells, including hematopoietic cells such as platelets, monocytes, and macrophages, as well as adipocytes, enterocytes, cardiac and skeletal myocytes, and endothelial and epithelial cells.^{1,4} It also exists as a soluble form, sCD36, which is produced *via* plasma proteases.² CD36 expression is regulated by several transcription factors, including peroxisome proliferator-activated receptor (PPAR), STAT3, and hypoxia-inducible factor-1α (HIF-1α), in a tissue-dependent manner.^{1,3} It is localized to the plasma membrane and within endosomes, the endoplasmic reticulum, and mitochondria, and is translocated between these compartments in response to various stimuli, including insulin-induced PI3K signaling and muscle contraction-induced AMPK signaling, to regulate fatty acid uptake.^{2,3} It has additional roles in the phagocytosis of apoptotic cells and *P. falciparum*-infected red blood cells (RBCs), angiogenesis, thrombosis, inflammation, and atherosclerosis, as well as cancer metastasis.^{3,5} Cayman's Scavenger Receptor B2/CD36 Monoclonal Antibody (Clone JC63.1) (Low Endotoxin) can be used for flow cytometry (FC) and immunocytochemistry (ICC) applications that require endotoxin levels of ≤2 EU/mg. Lower endotoxin levels can be achieved upon request.

References

1. Glatz, J.F.C. and Luiken, J.J.F.P. *J. Lipid Res.* **59(7)**, 1084-1093 (2018).
2. Wang, J. and Li, Y. *Theranostics* **9(17)**, 4893-4908 (2019).
3. Yang, X., Okamura, D., Lu, X., *et al. Nat. Rev. Nephrol.* **13(12)**, 769-781 (2017).
4. Glatz, J.F.C., and Luiken, J.J.F.P. *Biochimie* **136**, 21-26 (2017).
5. Maréchal, L., Laviolette, M., Rodrigue-Way, A., *et al. Int. J. Mol. Sci.* **19(5)**, 1529 (2017).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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