PRODUCT INFORMATION

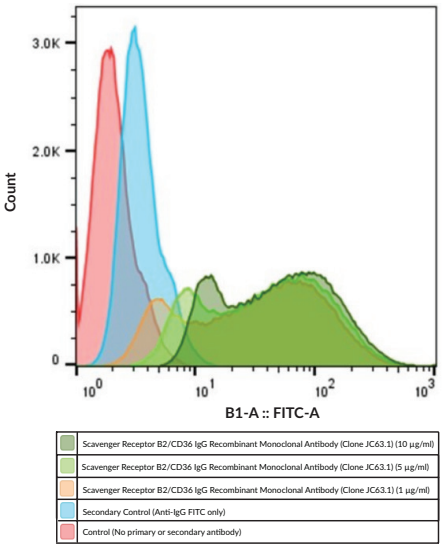
Scavenger Receptor B2/CD36 IgG Recombinant Monoclonal Antibody (Clone JC63.1)

Item No. 33938

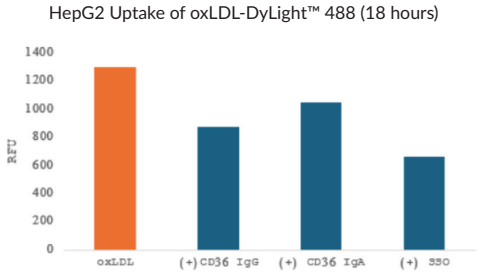
Overview and Properties

Contents:	This vial contains 100 µg of protein G-purified monoclonal antibody.
Synonyms:	Fatty Acid Translocase, GPIIIb, GPIV, PAS IV, Platelet Glycoprotein 4, Platelet Glycoprotein IV
Preparation:	This antibody, which contains a mouse IgG1 isoform, was produced as a recombinant protein expressed in HEK293 cells using an engineered construct based on a monoclonal SR-B2/CD36 antibody (Item No. 188150 – Scavenger Receptor B2/CD36 Monoclonal Antibody (Clone JC63.1))
Cross Reactivity:	(+) CD36
Species Reactivity:	(+) Human, mouse, rat; other species not tested
Uniprot No.:	Q08857
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	HEK293 cells
Isotype:	IgG1
Applications:	Flow cytometry (FC); the recommended starting concentration is 1:1,000 for FC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Raw 264.7 cells were fixed with 3.7% formaldehyde and blocked with 1% FBS. Cells were probed with the indicated amounts of Scavenger Receptor B2/CD36 IgG Recombinant Monoclonal Antibody (Clone JC63.1) followed by Cayman's Goat Anti-Mouse (IgG+IgM) FITC (Item No. 10006617).



CD36 Blocking. CD36 was blocked with sulfosuccinimidyl oleate (SSO; Item No. 11211) and antibody inhibitors. 18 hour incubation of oxLDL-DyLight™ 488 (Item No. 601181) with and without anti-CD36 IgA (Item No. 188150) or anti-CD36 IgG (Item No. 33938) resulted in 20% and 32% reduced uptake, respectively. SSO lowered oxLDL-DyLight™ 488 uptake by 49%.

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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 IgG Recombinant Monoclonal Antibody (Clone JC63.1) was developed to provide an IgG isotype alternative to the IgA isotype JC63.1 clone (Item No. 188150), and can be used for flow cytometry.

References

1. Glatz, J.F.C. and Luiken, J.J.F.P. Dynamic role of the transmembrane glycoprotein CD36 (SR-B2) in cellular fatty acid uptake and utilization. *J. Lipid Res.* **59(7)**, 1084-1093 (2018).
2. Wang, J. and Li, Y. CD36 tango in cancer: Signaling pathways and functions. *Theranostics* **9(17)**, 4893-4908 (2019).
3. Yang, X., Okamura, D., Lu, X., *et al*. CD36 in chronic kidney disease: Novel insights and therapeutic opportunities. *Nat. Rev. Nephrol.* **13(12)**, 769-781 (2017).
4. Glatz, J.F.C. and Luiken, J.J.F.P. From fat to FAT (CD36/SR-B2). *Biochimie* **136**, 21-26 (2017).
5. Maréchal, L., Laviolette, M., Rodrigue-Way, A., *et al*. The CD36-PPARγ pathway in metabolic disorders. *Int. J. Mol. Sci.* **19(5)**, 1529 (2017).

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