abcam

ab80080

Anti-CD36 antibody [MF3] - Low endotoxin, Azide free

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Cd36 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q08857
Carrier free	Yes
Clone number	MF3
Purification technique	Affinity purification Protein G
Specificity	Antibodies produced by clone MF3 have been shown to inhibit IL4 induced thioglycollate-elicited peritoneal macrophage fusion and significantly block IL4/GM-CSF-induced bone-marrorw derived macrophage fusion.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Cd36

Function

Multifunctional glycoprotein that acts as a receptor for a broad range of ligands. Ligands can be of proteinaceous nature like thrombospondin, fibronectin, collagen or amyloid-beta as well as of lipidic nature such as oxidized low-density lipoprotein (oxLDL), anionic phospholipids, long-chain fatty acids and bacterial diacylated lipopeptides (PubMed:7685021). They are generally multivalent and can therefore engage multiple receptors simultaneously, the resulting formation of CD36 clusters initiates signal transduction and internalization of receptor-ligand complexes. The dependency on coreceptor signaling is strongly ligand specific. Cellular responses to these ligands are involved in angiogenesis, inflammatory response, fatty acid metabolism, taste and dietary fat processing in the intestine (Probable) (PubMed:19847289, PubMed:20037584, PubMed:23395392). Binds long-chain fatty acids and facilitates their transport into cells, thus participating in muscle lipid utilization, adipose energy storage, and gut fat absorption (PubMed:30605677). Mechanistically, palmitoylated CD36 captures fatty acids on the cell surface, the binding of fatty acids activates downstream kinase LYN, which phosphorylates the palmitoyltransferase ZDHHC5 and inactivates it, resulting in the subsequent depalmitoylation of CD36, a step needed to initiate the endocytic process and delivery of fatty acids into the cell (PubMed:32958780). In the small intestine, plays a role in proximal absorption of dietary fatty acid and cholesterol for optimal chylomicron formation, possibly through the activation of MAPK1/3 (ERK1/2) signaling pathway (By similarity) (PubMed:17507371, PubMed:18753675, PubMed:21610069). Involved in oral fat perception and preferences (PubMed:16276419). Detection into the tongue of long-chain fatty acids leads to a rapid and sustained rise in flux and protein content of pancreatobiliary secretions (By similarity) (PubMed:16276419). In taste receptor cells, mediates the induction of an increase in intracellular calcium levels by long-chain fatty acids, leading to the activation of the gustatory neurons in the nucleus of the solitary tract (PubMed:18162488). Important factor in both ventromedial hypothalamus neuronal sensing of long-chain fatty acid and the regulation of energy and glucose homeostasis (By similarity) (PubMed:23557700). Receptor for thrombospondins, THBS1 and THBS2, mediating their antiangiogenic effects (PubMed:15748999). Involved in inducing apoptosis in podocytes in response to elevated free fatty acids, acting together with THBS1 (PubMed:25835637). As a coreceptor for TLR4:TLR6 heterodimer, promotes inflammation in monocytes/macrophages. Upon ligand binding, such as oxLDL or amyloid-beta 42, interacts with the heterodimer TLR4:TLR6, the complex is internalized and triggers inflammatory response, leading to NF-kappa-B-dependent production of CXCL1, CXCL2 and CCL9 cytokines, via MYD88 signaling pathway, and CCL5 cytokine, via TICAM1 signaling pathway, as well as IL1B secretion, through the priming and activation of the NLRP3 inflammasome (PubMed:20037584, PubMed:23812099). Selective and nonredundant sensor of microbial diacylated lipopeptide that signal via TLR2:TLR6 heterodimer, this cluster triggers signaling from the cell surface, leading to the NF-

kappa-B-dependent production of TNF, via MYD88 signaling pathway and subsequently is targeted to the Golgi in a lipid-raft dependent pathway (By similarity) (PubMed:15690042, PubMed:19847289). (Microbial infection) Acts as an accessory receptor for M.tuberculosis lipoprotein LprA, in conjunction with coreceptors TLR2 and TLR1; the lipoprotein acts as an agonist to modulate antigen presenting cell functions in response to the pathogen (PubMed:19362712). Directly mediates cytoadherence of Plasmodium falciparum parasitized erythrocytes and the internalization of particles independently of TLR signaling (PubMed:19864601, PubMed:23395392). Mediates uptake of E.coli and S.aureus but has no effect on uptake of M.fortuitum (PubMed:16020694).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Endotoxin Level <0.01EU/ug.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

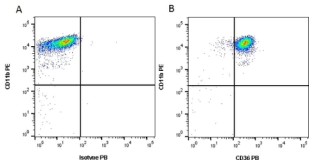
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

1 product image



Flow Cytometry - Anti-CD36 antibody [MF3] - Low endotoxin, Azide free (ab80080)

CD36 Flow Cytometry staining using rat Anti-CD36 antibody

Figure A. RPE conjugated Rat anti Mouse CD11b and Pacific Blue conjugated Rat IgG2a isotype control. Figure B. RPE conjugated Rat anti Mouse CD11b and Pacific Blue conjugated Rat anti Mouse CD36. All experiments performed on mouse peritoneal macrophages gated on live, single cells in the presence of 10% mouse serum. Data acquired on the ZE5™ Cell Analyzer

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.