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Product datasheet

Anti-CD36 antibody [MF3] - Low endotoxin, Azide free ab80080

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Overview

Product name	Anti-CD36 antibody [MF3] - Low endotoxin, Azide free
Description	Rat monoclonal [MF3] to CD36 - Low endotoxin, Azide free
Host species	Rat
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.
Tested applications	**Suitable for:** Flow Cyt
Species reactivity	**Reacts with:** Mouse
Immunogen	Tissue, cells or virus corresponding to Mouse CD36. IL4 treated murine thioglycollate-elicited peritoneal macrophages.
Positive control	Mouse peripheral blood platelets.
General notes	Endotoxin Level <0.01EU/ug. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.40 Constituent: PBS
Carrier free	Yes
Purity	Protein G purified
Clonality	Monoclonal

Clone number	MF3
Myeloma	Y3/Ag1.2.3
Isotype	IgG2a

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab80080 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use at an assay dependent concentration.

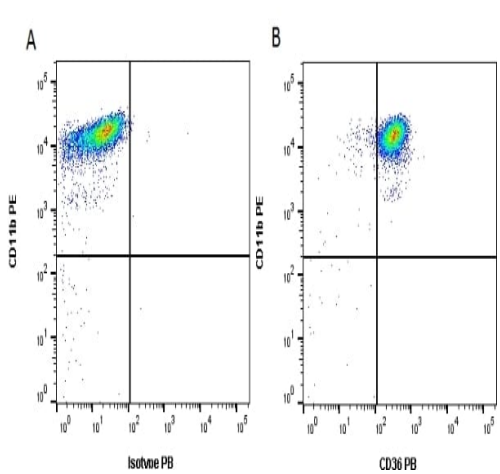
Target

Function

Multifunctional glycoprotein that acts as 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. 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). Binds long-chain fatty acids and facilitates their transport into cells, thus participating in muscle lipid utilization, adipose energy storage, and gut fat absorption (By similarity) (PubMed:18353783, PubMed:21610069). 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:18753675). Involved in oral fat perception and preferences (PubMed:22240721, PubMed:25822988). 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). In taste receptor cells, mediates the induction of an increase in intracellulare calcium levels by long-chain fatty acids, leading to the activation of the gustatory neurons in the nucleus of the solitary tract (By similarity). Important factor in both ventromedial hypothalamus neuronal sensing of long-chain fatty acid and the regulation of energy and glucose homeostasis (By similarity). Receptor for thombospondins, THBS1 and THBS2, mediating their antiangiogenic effects (By similarity). 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 (By similarity) (PubMed:20037584). 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:16880211).
(Microbial infection) Directly mediates cytoadherence of Plasmodium falciparum parasitized erythrocytes and the internalization of particles independently of TLR signaling.

Involvement in disease	Platelet glycoprotein IV deficiency Coronary heart disease 7
Sequence similarities	Belongs to the CD36 family.
Post-translational modifications	N-glycosylated and O-glycosylated with a ratio of 2:1. Ubiquitinated at Lys-469 and Lys-472. Ubiquitination is induced by fatty acids such as oleic acid and leads to degradation by the proteasome (PubMed:21610069, PubMed:18353783). Ubiquitination and degradation are inhibited by insulin which blocks the effect of fatty acids (PubMed:18353783).
Cellular localization	Cell membrane. Membrane raft. Golgi apparatus. Apical cell membrane. Upon ligand-binding, internalized through dynamin-dependent endocytosis.

Images



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

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

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