Product datasheet

Anti-CD36 antibody [JC63.1] ab23680

Overview

Product name  Anti-CD36 antibody [JC63.1]
Description  Mouse monoclonal [JC63.1] to CD36
Host species  Mouse

Tested applications  Suitable for: Flow Cyt, Blocking, ICC/IF
Species reactivity  Reacts with: Mouse, Rat, Human
Immunogen  Recombinant full length protein corresponding to Mouse CD36.
Database link: Q08857

Positive control  Cells from adipose tissue, heart tissue, platelets and macrophages. Flow cytometry: RAW264.7 cells. ICC/IF: 3T3-L1 adipocytes.

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer  Preservative: 0.02% Sodium Azide
Constituents: 50% Glycerol, PBS, pH 7.2

Clonality  Monoclonal
Clone number  JC63.1
Isotype  IgA

Applications

Our Abpromise guarantee covers the use of ab23680 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<td>Flow Cyt</td>
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<td>Use a concentration of 0.5 µg/ml. ab37322 - Mouse monoclonal IgA, is suitable for use as an isotype control with this antibody.</td>
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### 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 intracellular 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.
Cellular localization


Images

ab23680 staining the CD36 in RAW 264.7 cells by Flow Cytometry.

Immunofluorescence analysis of 3T3-L1 adipocytes, staining CD36 with ab23680.

Cells were fixed with paraformaldehyde, permeabilized with 0.01% saponin and blocked with 1% BSA. Samples were incubated with primary antibody overnight at 4°C.

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