Product datasheet

Anti-CD36 antibody [EPR6573] ab133625

Overview

Product name: Anti-CD36 antibody [EPR6573]
Description: Rabbit monoclonal [EPR6573] to CD36
Host species: Rabbit
Tested applications: Suitable for: WB, IP, IHC-P
Species reactivity: Reacts with: Mouse, Guinea pig, Human
Immunogen: Synthetic peptide within Human CD36 aa 350-450. The exact sequence is proprietary. Database link: P16671
(Peptide available as ab190596)

Positive control: WB: 3T3-L1 and NIH 3T3 cell lysates. IP: 3T3-L1 cell lysate. IHC-P: FFPE Ms small intestine tissue sections

General notes:

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

This product is a recombinant rabbit monoclonal antibody.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer: pH: 7.40
Preservative: 0.01% Sodium azide
Constituents: 40% Glycerol, 0.05% BSA, 59% PBS

8 Reviews 19 References 8 Images
Purity: Protein A purified

Clonality: Monoclonal

Clone number: EPR6573

Isotype: IgG

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 thrombospondins, 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-

Applications

Our Abpromise guarantee covers the use of ab133625 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/1000 - 1/10000. Detects a band of approximately 78-88 kDa (predicted molecular weight: 53 kDa). Can be blocked with CD36 peptide (ab190596). For unpurified use at 1/100 - 1/1000.</td>
</tr>
<tr>
<td>IP</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/50. For unpurified use at 1/5.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
</tr>
</tbody>
</table>

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 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 thrombospondins, 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.

<table>
<thead>
<tr>
<th>Involvement in disease</th>
<th>Platelet glycoprotein IV deficiency</th>
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<td></td>
<td>Coronary heart disease 7</td>
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</table>

**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**


**Images**
**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD36 antibody [EPR6573] (ab133625)**

IHC image of CD36 staining in mouse small intestine formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab133625, 1/100, for 15 mins at room temperature. A goat anti-rabbit biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.
Lane 1: Anti-CD36 antibody [EPR6573] (ab133625) at 1/200 dilution

Lane 2: Anti-CD36 antibody [EPR6573] (ab133625) at 1/1000 dilution

All lanes: U937 (Human histiocytic lymphoma monocyte) whole cell lysates

Lysates/proteins at 15 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/20000 dilution

Predicted band size: 53 kDa

Observed band size: 78,88 kDa

Exposure time: 1 minute

Blocking and diluting buffer: 5% NFDM/TBST.

The different result is due to the lysates preparation method. The lysate in the left image is prepared by RIPA lysis method. The lysate in the right image is prepared by 1%SDS Hot lysis method. This antibody works better in 1%SDS Hot Lysates in WB.

For Lysate preparation protocol, please refer to the protocol book in the protocol section and/or here (downloadable copy).
**Western blot - Anti-CD36 antibody [EPR6573]** (ab133625)

**All lanes:** Anti-CD36 antibody [EPR6573] (ab133625) at 1/1000 dilution

**Lane 1:** Human Heart Tissue Lysate  
**Lane 2:** Human Adipose Tissue Lysate  
**Lane 3:** Mouse Adipose Tissue Lysate  
**Lane 4:** Human Platelet Lysate

Lysates/proteins at 20 µg per lane.

**Secondary**  
**All lanes:** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 53 kDa  
**Observed band size:** 88 kDa

**Exposure time:** 2 minutes

This blot was produced using a 10% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab133625 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.
Anti-CD36 antibody [EPR6573] (ab133625) at 1/10000 dilution (purified) + NIH/3T3 cell lysate at 10 µg

**Secondary**
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Predicted band size:** 53 kDa  
**Observed band size:** 78-88 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM/TBST.

The lysate in this image is prepared by 1% SDS Hot lysis method.

For Lysate preparation protocol, please refer to the protocol book in the protocol section and/or here (downloadable copy).
Anti-CD36 antibody [EPR6573] (ab133625) at 1/1000 dilution (unpurified) + NIH/3T3 at 10 µg

**Secondary**
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Predicted band size:** 53 kDa
**Observed band size:** 78-88 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

The lysate in this image is prepared by 1% SDS Hot Lysate buffer. For Lysate preparation protocol, please refer to the protocol book in the protocol section and/or here (downloadable copy).
All lanes: Anti-CD36 antibody [EPR6573] (ab133625) at 1/1000 dilution (unpurified)

Lane 1: 3T3-L1 cell lysate
Lane 2: NIH 3T3 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes: HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 53 kDa
Observed band size: 78-88 kDa

The lysate in this image is prepared by 1%SDS Hot Lysate buffer. For Lysate preparation protocol, please refer to the protocol book in the protocol section and/or here (downloadable copy).

ab133625 (unpurified) at 1/5 immunoprecipitating CD36 in 3T3-L1 cell lysate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.
Immunoprecipitation - Anti-CD36 antibody
[EPB673] (ab133625)

ab133625 (purified) at 1/50 immunoprecipitating CD36 in 3T3-L1 cell lysate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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