abcam

Product datasheet

Anti-CD36 antibody [EPR6573] ab133625

Recombinant RabMAb

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Overview

Product name	Anti-CD36 antibody [EPR6573]
Description	Rabbit monoclonal [EPR6573] to CD36
Host species	Rabbit
Specificity	The immunogen used for this product shares 57% homology with SCARB1. Cross-reactivity with this protein has not been confirmed experimentally. Expression levels of the target protein vary with sample type and some optimisation may be required.
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: HepG2, 3T3-L1 and NIH 3T3 cell lysates; human adipose tissue and platelet lysates. IP: 3T3-L1 cell lysate. IHC-P: FFPE Mouse small intestine tissue; human cardiac muscle and hepatocellular cancer tissue.
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
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR6573
Isotype	IgG

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.

Application	Abreviews	Notes
WB	★★★★★	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.** DS: *For Lysate preparation protocol, please refer to the protocol book in the protocol section.*
IP	★★★★★	1/50. **For unpurified use at 1/5.**
IHC-P	★☆☆☆☆	1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. We do not guarantee IHC-P for mouse species and did not test IHC-P on guinea pig tissues.

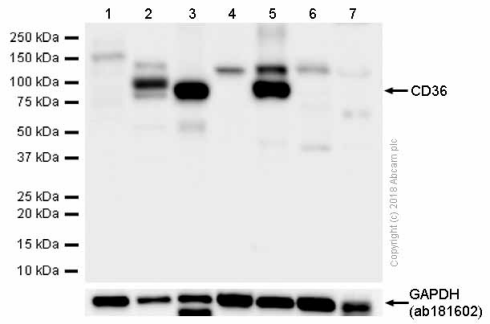
Target

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



Western blot - Anti-CD36 antibody [EPR6573] (ab133625)

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

Lane 1 : THP-1 (Human monocytic leukemia monocyte) whole cell lysates with 5% NFDM/TBST
Lane 2 : THP-1 (Human monocytic leukemia monocyte) treated with 100ng/ml PMA (Phorbol-12-myristate-13-acetate) for 72 hours whole cell lysates with 5% NFDM/TBST
Lane 3 : Human adipose lysates with 5% NFDM/TBST
Lane 4 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates with 5% NFDM/TBST
Lane 5 : 3T3-L1 (Mouse embryonic fibroblast) whole cell lysates with 5% NFDM/TBST
Lane 6 : RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysates with 5% NFDM/TBST
Lane 7 : Mouse liver lysates with 5% NFDM/TBST

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 53 kDa

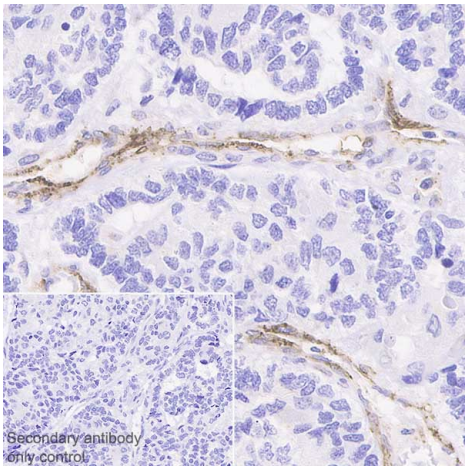
Observed band size: 78 kDa

why is the actual band size different from the predicted?

Exposure time: 50 seconds

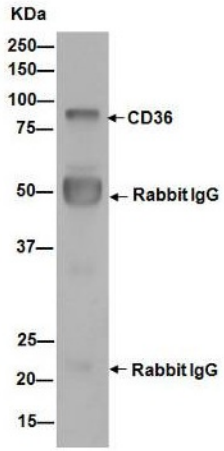
The expression level of CD36 varies in different samples, and it could be upregulated by treatments such as PMA and Porphyromonas gingivalis (PMID: 8576181 and 27234131).

RAW 264.7 and mouse liver are reported to be positive for CD36 by PMID: 26187465 and 26186589, but this antibody failed to detect clear signal in normal conditions.



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

Ab133625 staining CD36 in paraffin embedded Human Hepatocellular cancer tissue sections by Immunohistochemistry (Formalin/PFA fixed paraffin embedded sections). Tissue was counterstained with hematoxylin and heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Samples were incubated with primary antibody at 1/10,000 dilution (0.17µg/ml). A ready to use Goat anti-rabbit IgG H&L (HRP) was used as the secondary antibody. Positive staining on endothelial cells in human hepatocellular cancer.

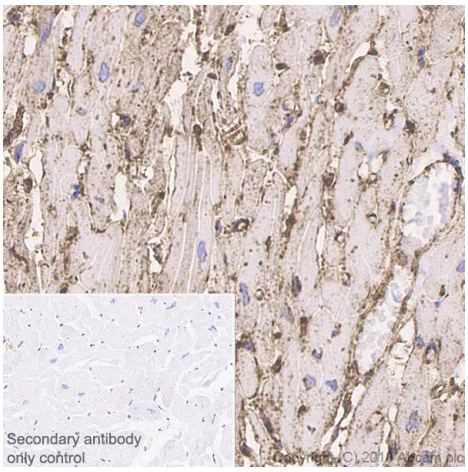


Immunoprecipitation - Anti-CD36 antibody [EPR6573] (ab133625)

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).

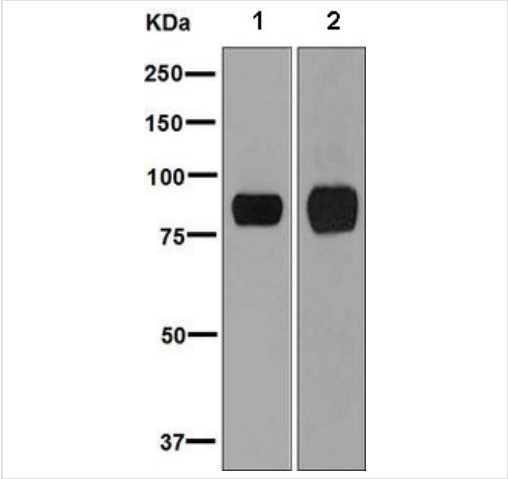
Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



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

Ab133625 staining CD36 in paraffin embedded Human cardiac muscle tissue sections by Immunohistochemistry (Formalin/PFA fixed paraffin embedded sections). Tissue was counterstained with hematoxylin and heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Samples were incubated with primary antibody at 1/10,000 dilution (0.17µg/ml). A ready to use Goat anti-rabbit IgG H&L (HRP) was used as the secondary antibody. Positive staining mainly on endothelial cells in human cardiac muscle.



Western blot - Anti-CD36 antibody [EPR6573] (ab133625)

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

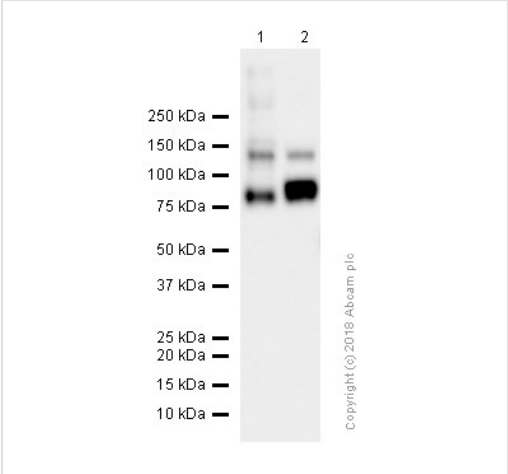
Lane 1 : 3T3-L1 cell lysate
Lane 2 : NIH 3T3 cell lysate

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 why is the actual band size different from the predicted?

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).



Western blot - Anti-CD36 antibody [EPR6573] (ab133625)

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

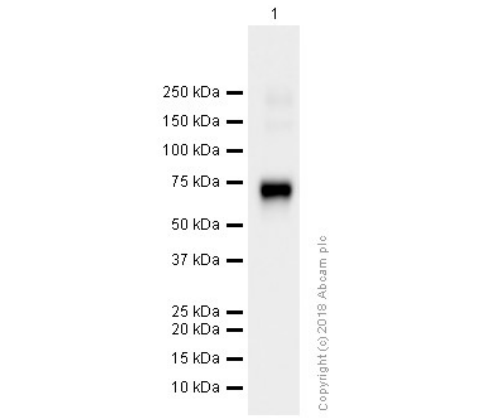
Lane 1 : 3T3-L1 (Mouse embryonic fibroblast) whole cell lysates prepared in RIPA lysis method with 5% NFDM/TBST
Lane 2 : 3T3-L1 (Mouse embryonic fibroblast) whole cell lysates prepared in 1%SDS Hot lysis method with 5% NFDM/TBST

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 53 kDa
Observed band size: 78 kDa why is the actual band size different from the predicted?

Exposure time: 10 seconds



Western blot - Anti-CD36 antibody [EPR6573] (ab133625)

Anti-CD36 antibody [EPR6573] (ab133625) at 1/1000 dilution + HEK293 (human embryonic kidney epithelial cell) transfected with His-tagged human CD36 (30aa-439aa) expression vector, whole cell lysate at 20 µg with 5% NFDM/TBST

Secondary
Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 53 kDa
Observed band size: 74 kDa why is the actual band size different from the predicted?

Exposure time: 3 seconds

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

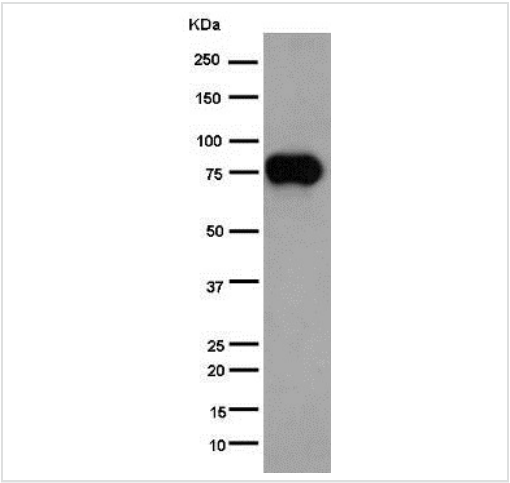
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 53 kDa
Observed band size: 88 kDa why is the actual band size different from the predicted?

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.



Western blot - Anti-CD36 antibody [EPR6573] (ab133625)

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

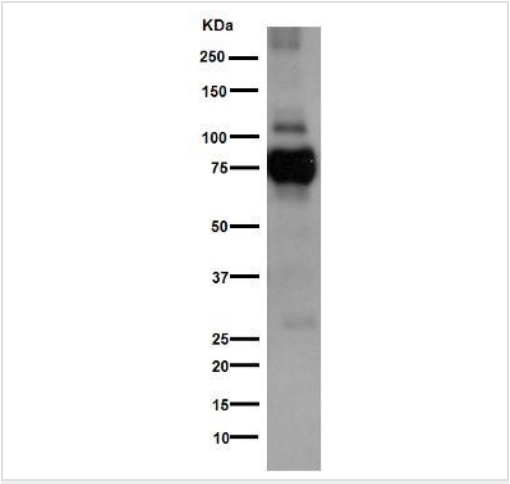
Predicted band size: 53 kDa
Observed band size: 78-88 kDa why is the actual band size different from the predicted?

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).



Western blot - Anti-CD36 antibody [EPR6573] (ab133625)

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

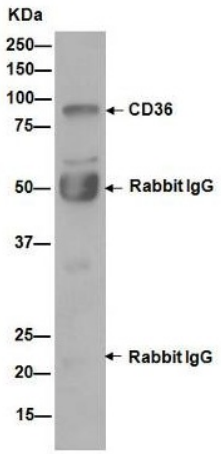
Predicted band size: 53 kDa
Observed band size: 78-88 kDa why is the actual band size different from the predicted?

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).



Immunoprecipitation - Anti-CD36 antibody [EPR6573] (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.

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