abcam

ab255331

Anti-CD36 antibody [EPR22509-40] - BSA and Azide free

Recombinant RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR22509-40
Purification technique	Affinity purification Protein A
Specificity	CD36 expression is low in the normal brain (PMID: 27646002). Mouse species is recommended based on WB results, we do not guarantee IHC-P for mouse. ab252922 doesn't work in mouse and rat liver as it detects no signal at CD36 position and a close nonspecific band.
Concentration	1.064 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Rat, Human, Mouse
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Rat
Dilution info	-
Notes	IHC is recommend only for human and rat.

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	IHC is recommend only for human and rat.

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. 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:21395585, PubMed:21610069). 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: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). Involved in inducing apoptosis in podocytes in response to elevated free fatty acids, acting together with THBS1 (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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab255331 is the carrier-free version of ab252922.

Patented technology

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

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

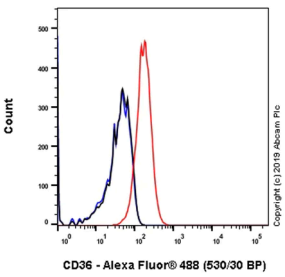
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

10 product images



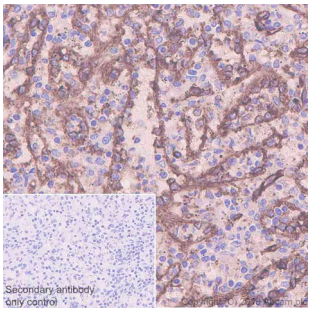
Flow Cytometry - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Flow Cytometry staining using rabbit Anti-CD36 antibody

Flow cytometric analysis of THP-1 (human monocytic leukemia cell line) cells labelingCD36 with ab252922 at 1/50 dilution (red) compared with a Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue).
Goat Anti-Rabbit IgG Fc (Alexa Fluo$^{r®}$ 488) preadsorbed (ab150097), at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).

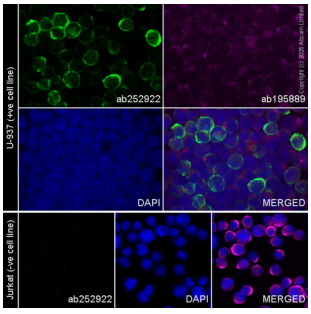


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

Immunohistochemical analysis of paraffin-embedded human spleen tissue labeling CD36 with ab252922 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on endothelial cells of human spleen (PMID:30047927,22777768) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).

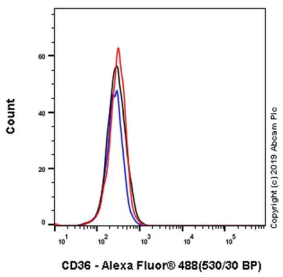


Immunocytochemistry/ Immunofluorescence - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD36 antibody

This data was developed using ab252922, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 80% Methanol fixed 0.1% TritonX-100 permeabilised U937 (Human histiocytic lymphoma monocyte) cells and Jurkat (human T cell leukemia cell line from peripheral blood) cells labelling CD36 with ab252922 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) secondary antibody at 1/1000 dilution. Confocal image showing membranous staining in U937 cells (Human histiocytic lymphoma monocyte) is observed. Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used to counterstain Alpha Tubulin at 1/200 dilution. The Nuclear counterstain is DAPI .



Flow Cytometry - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

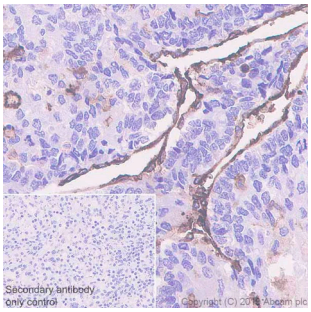
CD36 Flow Cytometry staining using rabbit Anti-CD36 antibody

Flow cytometric analysis of Ramos (human Burkitt's lymphoma B lymphocyte) cells labeling CD36 with ab252922 at 1/50 dilution (red) compared with a Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue).
Goat Anti-Rabbit IgG Fc (Alexa Fluor® 488) preadsorbed (ab150097), at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells.

Negative control: Ramos (PMID: 10744776).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).



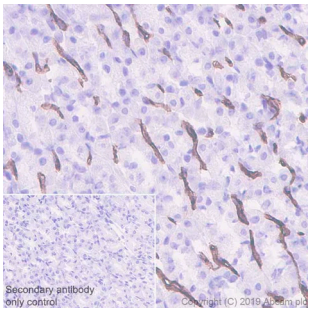
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD36 antibody

Immunohistochemical analysis of paraffin-embedded human hepatocellular tissue labeling CD36 with ab252922 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on endothelial cells of human hepatocellular carcinoma (PMID:30047927,22777768) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).



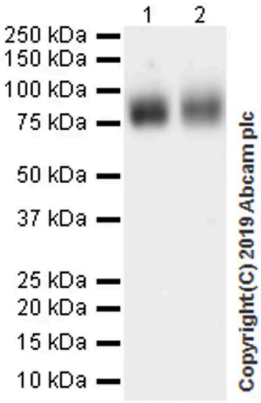
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD36 antibody

Immunohistochemical analysis of paraffin-embedded rat stomach tissue labeling CD36 with ab252922 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on endothelial cells of rat stomach. (PMID:30047927,22777768) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).



Western blot - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Western blot staining using rabbit Anti-CD36 antibody

This data was developed using ab255331, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

The molecular weight observed is due to glycosylation and consistent with what has been described in the literature (PMID:8798390,15677505,20637247).

All lanes:
Western blot - Anti-CD36 antibody [EPR22509-40] (ab252922) at 1000 Cells

Lane 1:
Human placenta tissue lysate at 20 µg

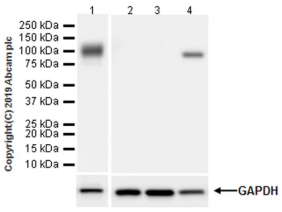
Lane 2:
Human lung tissue lysate at 20 µg

Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/4000 dilution

Predicted band size: 53 kDa

Exposure time: 3s



Western blot - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Western blot staining using rabbit Anti-CD36 antibody

This data was developed using ab255331, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Negative control: Ramos, Jurkat (PMID: 27956597,10744776)

The molecular weight observed is due to glycosylation and consistent with what has been described in the literature (PMID:8798390,15677505,20637247, 8631821).

All lanes:
Western blot - Anti-CD36 antibody [EPR22509-40] (ab252922) at 1/1000 dilution

Lane 1:
U937 (human histiocytic lymphoma cell line) whole cell lysate at 20 µg

Lane 2:
Ramos (human Burkitt's lymphoma cell line) whole cell lysate at 20 µg

Lane 3:
Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate at 20 µg

Lane 4:
Rat spleen tissue lysate at 20 µg

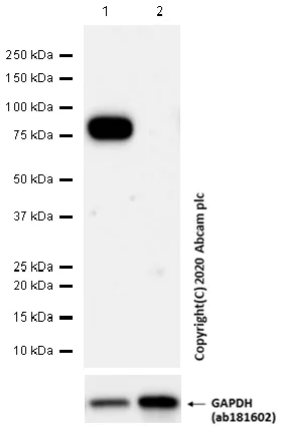
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 53 kDa

Observed band size: 70-110 kDa

Exposure time: 8s



Western blot - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

Blocking and dilution buffer: 5% NFDM/TBST
CD36 expression is low in the normal brain (PMID:27646002).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).

All lanes:
Western blot - Anti-CD36 antibody [EPR22509-40] (ab252922) at 1/1000 dilution

Lane 1:
Rat spleen tissue lysate at 20 µg

Lane 2:
Rat brain tissue lysate at 20 µg

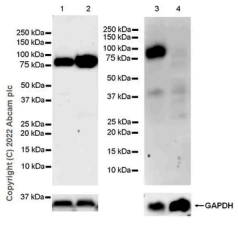
Secondary

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

Predicted band size: 53 kDa

Observed band size: 70-110 kDa

Exposure time: 180s



Western blot - Anti-CD36 antibody [EPR22509-40] - BSA and Azide free (ab255331)

CD36 Western blot staining using rabbit Anti-CD36 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab252922).
Blocking and diluting buffer and concentration: 5% NFDM/TBST

The molecular weight observed is due to glycosylation and consistent with what has been described in the literature (PMID:8798390, 15677505, 20637247, 8631821).

Low expression: brain (PMID: 27646002)

This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.
All lanes:
Western blot - Anti-CD36 antibody [EPR22509-40] (ab252922) at 1/1000 dilution

Lane 1:
Mouse white fat tissue lysate at 40 µg

Lane 2:
Mouse brown fat tissue lysate at 40 µg

Lane 3:
Mouse spleen tissue lysate at 40 µg

Lane 4:
Mouse brain tissue lysate at 40 µg

Secondary

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

Developed using the ECL technique.

Predicted band size: 53 kDa

Observed band size: 70 kDa, 100 kDa

Exposure time: 81s

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