abcam

ab248674

Anti-CD93 antibody [EPR5386] - 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	EPR5386
Purification technique	Affinity purification Protein A
Dissociation constant	1.8 x 10^{-11} M
Concentration	0.999 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	-

WB

Tested

Species	Human, Rat
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Rat, Human, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information CD93

Function

Cell surface receptor that plays a role in various physiological processes including inflammation, phagocytosis, and cell adhesion. Plays a role in phagocytosis and enhances the uptake of apoptotic cells and immune complexes by acting as a receptor for defense collagens including surfactant protein A/SFTPA1, C1q, and mannose-binding lectin (MBL2) (PubMed:7977768). Plays a role in the regulation of endothelial cell function and adhesion by activating angiogenesis (PubMed:24809468). Mechanistically, exerts its angiogenic function by associating with beta-dystroglycan, leading to SRC-dependent phosphorylation and subsequent recruitment of CBL. In turn, CBL provides a docking site for downstream signaling components, such as CRKL to enhance cell migration (PubMed:26848865). Participates in angiogenesis also by acting as a receptor for the ECM pan-endothelial glycoprotein multimerin-2/MMRN2 and IGFBP7 ligands (PubMed:28671670, PubMed:36265539, PubMed:38218180). Both ligands play a non-redundant role in CD93-mediated endothelial cell function (PubMed:38218180). Acts as a key regulator of endothelial barrier function through modulating VEGFR2 function (By similarity).

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

ab248674 is the carrier-free version of ab134079.

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD93 also known as C1q receptor and a type I transmembrane glycoprotein weighs approximately 68 kDa. This protein is mainly expressed on platelets monocytes endothelial cells and some cell lines within the immune system. CD93 is known for engaging in cell adhesion and phagocytosis processes. It has a notable presence on the surface of circulating cells indicating its involvement in physiological interactions essential for cellular communication.
Biological function summary	CD93 contributes to cellular processes through its role in the clearance of apoptotic cells and immune surveillance. It also partakes in angiogenesis facilitating the growth of new blood vessels. CD93 often functions as part of a larger complex in binding with other molecules to support cellular communication. By modulating the immune response CD93 ensures efficient removal of cellular debris maintaining homeostasis and preventing autoimmune reactions.
Pathways	CD93 operates within the innate immune response and complement system pathways. It closely interacts with other proteins such as C1q which is part of the complement activation pathway. This interaction supports the clearance of immune complexes and cellular debris. By facilitating these processes CD93 aids in maintaining the balance between immune activation and tolerance.
Associated diseases and disorders	CD93 has associations with inflammatory diseases and cancer progression. In inflammatory diseases its role in the immune system implicates it in conditions characterized by excessive inflammation often relating to the misregulation of immune functions. As for cancer CD93's involvement in angiogenesis links it to

tumor growth with connections seen alongside vascular endothelial growth factor (VEGF) pathways. These insights into CD93's role suggest its potential as a therapeutic target in treating related pathological states.

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

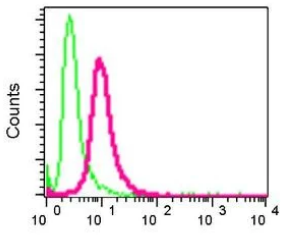
We do not recommend this combination. It is not covered by our product promise.

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.

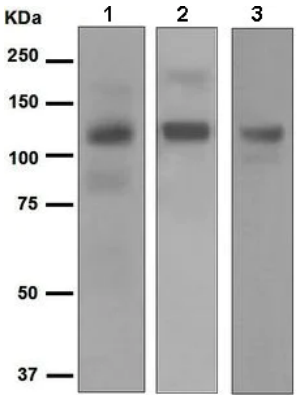
5 product images



Flow Cytometry (Intracellular) - Anti-CD93 antibody [EPR5386] - BSA and Azide free (ab248674)

CD93 Flow Cytometry (Intracellular) staining using rabbit Anti-CD93 antibody

This data was developed using ab134079, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized THP-1 cells labelling CD93 red with ab134079 at 1/100 and a rabbit IgG negative (green).



Western blot - Anti-CD93 antibody [EPR5386] - BSA and Azide free (ab248674)

This data was developed using ab134079, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-CD93 antibody [EPR5386] (ab134079) at 1/1000 dilution

Lane 1:
THP-1 lysate at 10 µg

Lane 2:
Rat kidney lysate at 10 µg

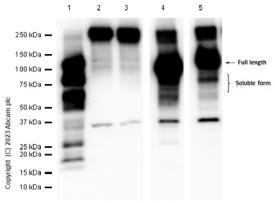
Lane 3:
Human platelet lysate at 10 µg

Secondary

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

Predicted band size: 69 kDa

Observed band size: 120 kDa



Western blot - Anti-CD93 antibody [EPR5386] - BSA and Azide free (ab248674)

The expression profile observed in Raji and 293T is consistent with the literatures (PMID: 31182688, PMID:15459234).

Negative control: Raji and 293T (PMID: 31182688, PMID:15459234).

Blocking and dilution buffer: 5% NFDM/TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134079).

All lanes:
Western blot - Anti-CD93 antibody [EPR5386] (ab134079) at 1/1000 dilution

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

Lane 2:
Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

Lane 3:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 4:
Rat spleen tissue lysate at 20 µg

Lane 5:
Mouse spleen tissue lysate at 20 µg

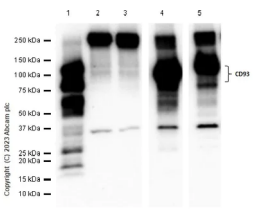
Secondary

All lanes:

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

Observed band size: 100 kDa, 50-80 kDa

Exposure time: 180s



Western blot - Anti-CD93 antibody [EPR5386] - BSA and Azide free (ab248674)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134079).

Bands around 100kDa and 75kDa are full length CD93 with different level of glycosylation (PMID: 19603257). We are not sure the identity of bands below 70kDa.

The expression profile observed in Raji and 293T is consistent with the literatures (PMID: 31182688, PMID:15459234).

Negative control: Raji and 293T (PMID: 31182688, PMID:15459234).

Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-CD93 antibody [EPR5386] (ab134079) at 1/1000 dilution

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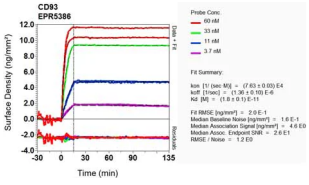
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Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 69 kDa

Observed band size: 100 kDa, 50-80 kDa

Exposure time: 180s



OI-RD Scanning - Anti-CD93 antibody [EPR5386] - BSA and Azide free (ab248674)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published

literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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