abcam

ab272734

Anti-Robo4 antibody [EPR23426-145]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23426-145
Purification technique	Affinity purification Protein A
Concentration	0.524 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	(1µg)

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	(0.52 µg/ml)

Not recommended

Species	Mouse
Dilution info	-
Notes	(0.52 µg/ml)

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ROBO4

Function	Receptor for Slit proteins, at least for SLIT2, and seems to be involved in angiogenesis and vascular patterning. May mediate the inhibition of primary endothelial cell migration by Slit proteins (By similarity). Involved in the maintenance of endothelial barrier organization and function (PubMed:30455415).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

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

Activity summary	Roundabout homolog 4 (Robo4) is a protein weighing approximately 107 kDa. It belongs to the immunoglobulin superfamily and is sometimes referred to as Magic Roundabout. Robo4 primarily gets expressed in endothelial cells playing an important function in vascular biology. It is characterized by having two immunoglobulin-like domains and two fibronectin type III domains making it distinct among the other Robo family members.
Biological function summary	Robo4 stabilizes the vascular network interacting actively with the guidance molecule Slit proteins. It is not part of a larger protein complex but engages directly with these ligands to influence endothelial cell migration and vascular permeability. Its role is significant in maintaining the structural integrity of blood vessels ensuring the appropriate cellular responses important for proper vascular function.
Pathways	Robo4 engages in the Slit-Robo signaling pathway that is essential for vascular development and remodeling. This pathway helps inhibit excessive endothelial migration and angiogenesis. Robo4 interacts with proteins like Slit2 which binds to it as a ligand to mediate these effects. Through this pathway Robo4 performs an important function in processes such as vascular homeostasis and angiogenesis regulation.
Associated diseases and disorders	Robo4 appears to have connections to vascular-related conditions including diabetic retinopathy and age-related macular degeneration. The protein influences pathological angiogenesis which is a hallmark in the progression of these diseases. In these contexts Robo4's interaction with Slit2 proves important as it can restrain abnormal vascular growth offering potential therapeutic angles for treatment approaches focused on targeting the Slit-Robo pathway.

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.

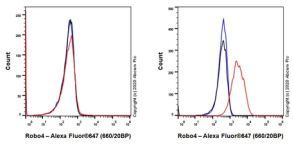
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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2 product images



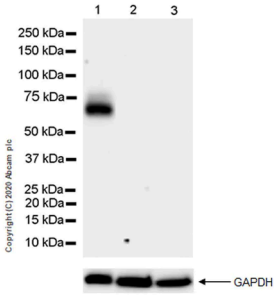
Flow Cytometry - Anti-Robo4 antibody [EPR23426-145] (ab272734)

Robo4 Flow Cytometry staining using rabbit Anti-Robo4 antibody

Flow cytometric analysis of HeLa (Human cervix adenocarcinoma epithelial cell) (Left panel) / HUVEC (Human umbilical vein endothelial cell) (Right panel) cells labelling Robo4 with ab272734 at 1/50 dilution (1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti rabbit IgG (Alexa Fluor® 647, ab150079) at 1/2000 dilution was used as the secondary antibody.
Negative control: HeLa (PMID: 11076864).

Gated on viable cells.

Brighter secondary antibody like Alexa Fluor® 647 is required to get desirable staining.



Western blot - Anti-Robo4 antibody [EPR23426-145] (ab272734)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Soluble Robo4 is observed.

The molecular weight observed is consistent with what have been described in literature (PMID: 27882935).

Negative control: HeLa, HEK-293T (PMID: 11076864, 12941633).

Exposure time: 48 seconds.

All lanes:
Western blot - Anti-Robo4 antibody [EPR23426-145] (ab272734) at 1/1000 dilution

Lane 1:
HUVEC (human umbilical vein endothelial cell) whole cell lysate at 20 µg

Lane 2:

HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

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

Secondary

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

Predicted band size: 107 kDa

Observed band size: 60 kDa

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