abcam

ab247548

Anti-Plexin A1 antibody [EPR3449] - 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	EPR3449
Purification technique	Affinity purification Protein A
Specificity	This antibody is expected to cross react with Plexin A3 and A4 due to 100% immunogen homology with Plexin A3 and 87.5 % with Plexin A4,however not tested experimentally.

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PLXNA1

Function	Coreceptor for SEMA3A, SEMA3C, SEMA3F and SEMA6D. Necessary for signaling by class 3 semaphorins and subsequent remodeling of the cytoskeleton. Plays a role in axon guidance, invasive growth and cell migration. Class 3 semaphorins bind to a complex composed of a neuropilin and a plexin. The plexin modulates the affinity of the complex for specific semaphorins, and its cytoplasmic domain is required for the activation of down-stream signaling events in the cytoplasm. Acts as coreceptor of TREM2 for SEMA6D in dendritic cells and is involved in the generation of immune responses and skeletal homeostasis.

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

ab247548 is the carrier-free version of ab92346.

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	Plexin A1 also known as PLXNA1 is a transmembrane protein that acts as a receptor for semaphorin proteins. It is involved in signaling pathways that guide cell migration and axonal growth. This protein has a molecular mass of around 220 kDa. Plexin A1 is expressed in several tissues including the nervous system where it plays a significant role in neural development. The expression levels can vary depending on the tissue type indicating its diverse functions across different biological contexts.
Biological function summary	Plexin A1 functions in neural patterning and the immune response. It is a part of semaphorin signaling complexes that include neuropilins and other plexins. These complexes are critical in translating extracellular cues into intracellular responses impacting cellular dynamics such as motility and adhesion. Plexin A1 also interacts with various intracellular signaling molecules influencing actin cytoskeleton reorganization which is essential for proper neural development.
Pathways	Plexin A1 participates in semaphorin signaling and cytoskeletal dynamics pathways. It interacts with Sema3A and Sema4D proteins which are key signaling semaphorins. These interactions regulate cellular movement by influencing the activity of downstream effectors like Rho and Rac GTPases. The involvement of Plexin A1 in these pathways is important for processes like axon guidance and neuronal connectivity.
Associated diseases and disorders	Plexin A1 has association with cancer progression and neurodevelopmental disorders. Altered expression levels of Plexin A1 can lead to dysfunction in semaphorin-mediated signaling contributing to conditions such as autism spectrum disorders and tumor metastasis. The protein interacts with Met a receptor tyrosine kinase known to be involved in cancer linking Plexin A1 with oncogenic pathways and providing insights into its role in pathological conditions.

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.

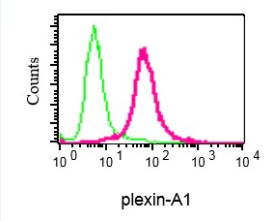
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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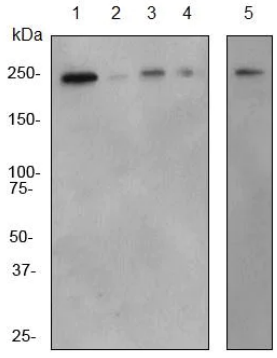
2 product images



Flow Cytometry (Intracellular) - Anti-Plexin A1 antibody [EPR3449] - BSA and Azide free (ab247548)

Plexin A1 Flow Cytometry (Intracellular) staining using rabbit Anti-Plexin A1 antibody

This data was developed using ab92346, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of permeabilized K562 cells labeling Plexin A1 with ab92346 at 1/50 (red) compared to a rabbit IgG (negative control) (green).



Western blot - Anti-Plexin A1 antibody [EPR3449] - BSA and Azide free (ab247548)

This data was developed using ab92346, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Plexin A1 antibody [EPR3449] (ab92346) at 1/1000 dilution

Lane 1:
K562 cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
HUVEC cell lysate at 10 µg

Lane 4:
HepG2 cell lysate at 10 µg

Lane 5:
Fetal brain tissue lysate at 10 µg

Secondary

All lanes:

HRP labelled goat anti-rabbit antibody at 1/2000 dilution

Predicted band size: 211 kDa

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