abcam

ab225579

Anti-Eph receptor A2 antibody [EPR17660-120] - 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	EPR17660-120
Purification technique	Affinity purification Protein A
Concentration	0.96 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	-

Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information Epha2

Function

Receptor tyrosine kinase which binds promiscuously membrane-bound ephrin-A family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Activated by the ligand ephrin-A1/EFNA1 regulates migration, integrin-mediated adhesion, proliferation and differentiation of cells (PubMed:29749928). Regulates cell adhesion and differentiation through DSG1/desmoglein-1 and inhibition of the ERK1/ERK2 signaling pathway. May also participate in UV radiation-induced apoptosis and have a ligand-independent stimulatory effect on chemotactic cell migration. During development, may function in distinctive aspects of pattern formation and subsequently in development of several fetal tissues. Involved for instance in angiogenesis, in early hindbrain development and epithelial proliferation and branching morphogenesis during mammary gland development. Engaged by the ligand ephrin-A5/EFNA5 may regulate lens fiber cells shape and interactions and be important for lens transparency development and maintenance. With ephrin-A2/EFNA2 may play a role in bone remodeling through regulation of osteoclastogenesis and osteoblastogenesis.

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

ab225579 is the carrier-free version of ab185156.

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	Eph receptor A2 also known as EphA2 or A2 receptor is a type of protein that functions as a receptor tyrosine kinase. It has an approximate mass of 130 kDa. Researchers find this receptor widely expressed in various tissues including epithelial cells and some neuronal populations. EphA2 is involved in cell positioning movement and organization by interacting with ephrin ligands notably ephrin A1. The receptor-ligand interaction triggers bidirectional signaling that affects cell structure and function.
Biological function summary	Eph receptor A2 participates in important cellular processes such as angiogenesis cell proliferation and migration. It often functions as part of larger signaling networks or complexes that include other Eph receptors and ephrin ligands. These interactions help regulate cell adhesion and detachment which are important for embryonic development and tissue organization. EphA2 studies often use fluorescent labeling strategies such as Alexa 588 to track its expression and activity in cells.
Pathways	Eph receptor A2 integrates into the PI3K/AKT and MAPK signaling pathways which are important for cell survival growth and differentiation. It interacts with proteins like Ras and ERK within these pathways to modulate their functions. EphA2 signaling influences cytoskeletal dynamics and morphogenesis making it an important component in maintaining tissue architecture. Research also indicates a

	connection between EphA2 and the APC protein highlighting its role in the Wnt signaling pathway.
Associated diseases and disorders	The Eph receptor A2 shows significant involvement in cancer and inflammatory conditions. Overexpression or dysregulation of EphA2 occurs frequently in various cancers including breast and prostate cancer correlating with increased tumor aggressiveness and metastasis. The receptor also interacts with other proteins such as APC which links to tumorigenesis and cancer progression. In immunology EphA2 plays a part in chronic inflammatory diseases by modulating immune cell migration and vascular inflammation. Understanding these connections provides insights for potential therapeutic targets using molecular interventions like A2 antibodies and APC-based strategies.

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

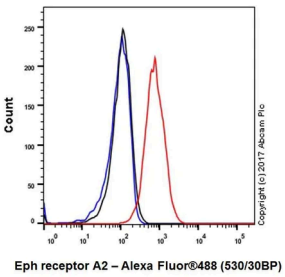
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

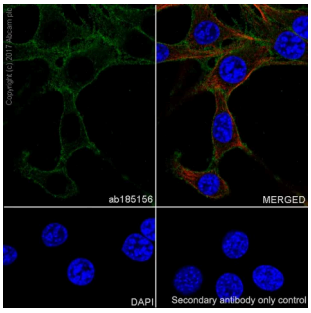


Flow Cytometry - Anti-Eph receptor A2 antibody [EPR17660-120] - BSA and Azide free (ab225579)

Eph receptor A2 Flow Cytometry staining using rabbit Anti-Eph receptor A2 antibody

Flow cytometric analysis of NIH/3T3 (mouse embryonic fibroblast cell line) cell line labeling Eph receptor A2 with ab185156 at 1/50 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.
Total viable cells were gated for the FC image.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab185156).



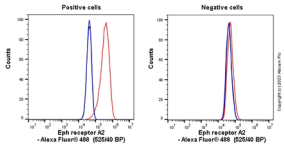
Immunocytochemistry/ Immunofluorescence - Anti-Eph receptor A2 antibody [EPR17660-120] - BSA and Azide free (ab225579)

Eph receptor A2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Eph receptor A2 antibody

Immunofluorescent analysis of 100% methanol-fixed NIH/3T3 (mouse embryonic fibroblast cell line) cells labeling Eph receptor A2 with ab185156 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous staining on NIH/3T3 cells.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab185156).



Flow Cytometry - Anti-Eph receptor A2 antibody [EPR17660-120] - BSA and Azide free (ab225579)

Eph receptor A2 Flow Cytometry staining using rabbit Anti-Eph receptor A2 antibody

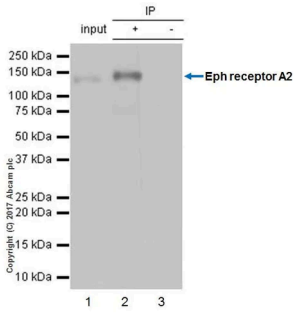
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab185156).

Flow cytometry overlay histogram showing left NIH3T3 positive cells and right negative B16-F10 stained with ab185156 (red line). The cells were incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interactionfollowed by the antibody (ab185156) (1x 106 in 100µl at 5.0 µg/ml (1/424)) for 30min on ice.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min on ice

Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



Immunoprecipitation - Anti-Eph receptor A2 antibody [EPR17660-120] - BSA and Azide free (ab225579)

Eph receptor A2 was immunoprecipitated from 0.35 mg of NIH/3T3 (mouse embryonic fibroblast cell line) lysate with ab185156 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab185156 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1000 dilution.
Lane 1: NIH/3T3 whole cell lysate 10 µg (Input).

Lane 2: ab185156 IP in NIH/3T3 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab185156 in NIH/3T3 whole cell lysate.

Exposure time: 10 seconds.

Blocking/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 (ab185156).

All lanes:
Immunoprecipitation - Anti-Eph receptor A2 antibody [EPR17660-120] (ab185156)

Predicted band size: 108 kDa

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