abcam

ab275594

FITC Anti-Eph receptor A2 antibody [101]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 0.5% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Mouse Epha2 aa 1-550. The exact immunogen used to generate this antibody is proprietary information. Database link Q03145
Clone number	101
Purification technique	Affinity purification Protein A

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	5 µl/Test.

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, Store in the dark

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

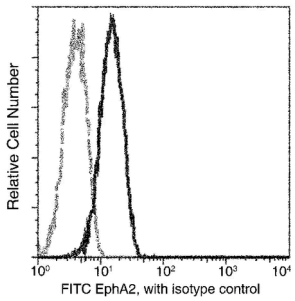
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - FITC Anti-Eph receptor A2 antibody [101] (ab275594)

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

Flow cytometric analysis of mouse Eph receptor A2 expression on MS-1 (mouse cell line) cells. Cells were stained with ab275594 (Black) at 5 µl/Test. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

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