abcam

ab59551

Anti-Eph receptor A2 antibody [Ka-5H5]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Nucleic Acid cDNA encoding human EphA2 within Human EPHA2. The exact immunogen used to generate this antibody is proprietary information. Database link P29317
Carrier free	Yes
Clone number	Ka-5H5
Purification technique	Affinity purification Protein G
Specificity	ab59551 recognises the complete native EphA2 protein expressed on transfected mammalian cells.
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Transfected cell line - Human

Dilution info	1.2 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	1.2 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Transfected cell line - Human
Dilution info	1 µg/cells for 6 µg/cells
Notes	-

Expected

Species	Human
Dilution info	1 µg for 10^6 Cells
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. Regulates cell adhesion and differentiation through DSG1/desmoglein-1 and inhibition of the ERK1/ERK2 (MAPK3/MAPK1, respectively) 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. (Microbial infection) Acts as a receptor for hepatitis C virus (HCV) in hepatocytes and facilitates its cell entry. Mediates HCV entry by promoting the formation of the CD81-CLDN1 receptor complexes that are essential for HCV entry and by enhancing membrane fusion of cells expressing HCV envelope glycoproteins. Acts as a receptor for human cytomegalovirus (HCMV) to mediate viral entry and fusion in glioblastoma cells.

Storage

Shipped at conditions	Blue Ice
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

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

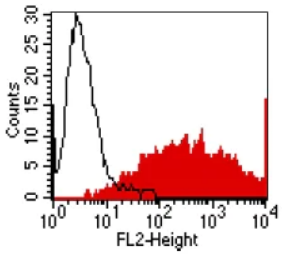
We do not recommend this combination. It is not covered by our product promise.

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.

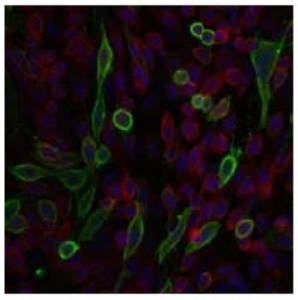
Full details and terms and conditions can be found here:
Terms & Conditions.

2 product images



Flow Cytometry - Anti-Eph receptor A2 antibody [Ka-5H5] (ab59551)

FACS analysis of BOSC23 cells using ab59551 at 1.2 µg/ 10^6 cells. BOSC23 cells were transiently trans-fected with an expression vector encoding either EphA2(red curve) or an irrelevant protein (control transfectant).Binding of ab59551 was detected with a PE-conjugatedsecondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Eph receptor A2 antibody [Ka-5H5] (ab59551)

Spectral Confocal Microscopy of CHO cells using ab59551 at 1µg/10^6 cells. CHO cells were transiently transfected with an expression vector encoding EphA2. Binding of ab59551 was visualized with a FITC-conjugated secondary antibody (green). Actin filaments are labeled with Alexa Fluor-555 Phalloidin (red). Cell nuclei are stained with DAPI (blue).

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