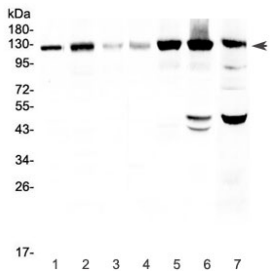
EPHA2 Antibody / Receptor Tyrosine Kinase Antibody (RQ4038)

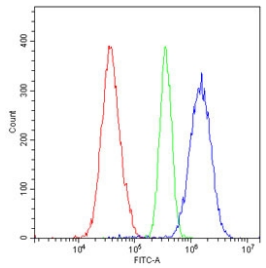
Catalog No.	Formulation	Size
RQ4038	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

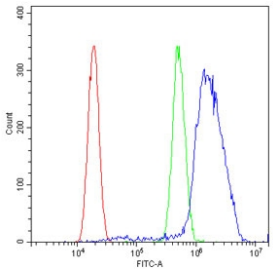
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P29317
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/10^6 cells Direct ELISA : 0.1-0.5ug/ml Immunofluorescence : 5ug/ml
Limitations	This EPHA2 Antibody / Receptor Tyrosine Kinase Antibody is available for research use only.



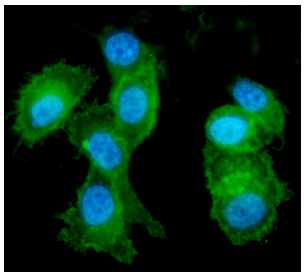
EPHA2 Antibody Multi-Cell Line WB. Western blot analysis of EPHA2 expression was performed using an Eph Receptor A2 antibody. Lane 1: human HeLa cell lysate. Lane 2: human U-87 MG cell lysate. Lane 3: human SHG-44 cell lysate. Lane 4: human COLO320 cell lysate. Lane 5: human SKOV3 cell lysate. Lane 6: human A549 cell lysate. Lane 7: mouse HEPA1-6 cell lysate. EPHA2, also known as Epithelial Cell Kinase and a Receptor Tyrosine Kinase, regulates cell adhesion, migration, and signal transduction through interactions with ephrin ligands. A prominent band is detected between approximately 108 and 130 kDa, consistent with the expected molecular weight of mature glycosylated EPHA2. Additional lower molecular weight species observed in A549 and HEPA1-6 cells may represent proteolytic fragments or differentially processed receptor forms. These results demonstrate broad EPHA2 expression across epithelial, neural, ovarian, pulmonary, and hepatic cell types and support the utility of Eph Receptor A2 Antibody for studies of cancer biology and receptor signaling.



EPHA2 Antibody A549 Cells FACS. Flow cytometric analysis of human A549 cells was performed using an Eph Receptor A2 antibody at 1 ug per 10^6 cells following blocking with goat sera. EPHA2, also known as Epithelial Cell Kinase and a Receptor Tyrosine Kinase, regulates cell adhesion, migration, and growth through interactions with membrane-bound ephrin ligands. Red histogram: cells alone. Green histogram: isotype control. Blue histogram: Eph Receptor A2 antibody. The pronounced rightward shift of the EPHA2 antibody signal relative to both controls demonstrates specific detection of endogenous EPHA2 expression in A549 lung adenocarcinoma cells. Elevated EPHA2 expression has been implicated in tumor progression and therapeutic resistance in multiple cancers. These results support the utility of Eph Receptor A2 Antibody for studies of receptor tyrosine kinase signaling, cell migration, and cancer biology.



EPHA2 Antibody U-2 OS Cells FACS. Flow cytometric analysis of human U-2 OS cells was performed using an Eph Receptor A2 antibody at 1 ug per 10^6 cells following blocking with goat sera. EPHA2, also known as Epithelial Cell Kinase and a Receptor Tyrosine Kinase, is a cell surface receptor that regulates cell adhesion, migration, proliferation, and tissue organization through interactions with ephrin ligands. Red histogram: cells alone. Green histogram: isotype control. Blue histogram: Eph Receptor A2 antibody. The marked rightward shift of the antibody signal relative to both controls demonstrates specific detection of endogenous EPHA2 expression in U-2 OS osteosarcoma cells. Elevated EPHA2 signaling has been implicated in tumor progression, invasion, and metastatic potential. These results support the utility of Eph Receptor A2 Antibody for studies of receptor tyrosine kinase signaling, cell migration, and cancer biology.



EPHA2 Antibody PC-3 Cells IF. Immunofluorescent analysis of EPHA2 expression was performed in human PC-3 cells using an anti-EPHA2 antibody. EPHA2, also known as Eph Receptor A2 and a Receptor Tyrosine Kinase, regulates cell adhesion, migration, and epithelial organization through interactions with ephrin ligands. Strong cytoplasmic and membrane-associated fluorescence is observed throughout the cells, consistent with the localization and trafficking of this cell surface receptor. Cells were incubated with rabbit anti-EPHA2 antibody at 5 ug/ml and detected with Fluoro488-conjugated goat anti-rabbit IgG (green). Nuclei were counterstained with DAPI (blue). These results support the utility of EPHA2 Antibody for studies of receptor tyrosine kinase signaling, cell migration, and cancer biology.

Description

EPHA2 Antibody / Receptor Tyrosine Kinase Antibody recognizes EPHA2, a member of the Eph family of receptor tyrosine kinases that mediates cell-cell communication through interactions with membrane-bound ephrin-A ligands. EPHA2 is widely expressed in epithelial tissues and regulates diverse processes including cell adhesion, migration, proliferation, differentiation, and tissue organization. Activation of EPHA2 signaling influences cellular positioning and contact-dependent communication, making this receptor an important regulator of development and tissue homeostasis. Originally identified as Epithelial Cell Kinase (ECK), EPHA2 has emerged as a key mediator of normal physiology and disease progression.

EPHA2 belongs to the largest family of receptor tyrosine kinases and consists of an extracellular ligand-binding domain, a transmembrane region, and an intracellular kinase domain. Binding of ephrin-A ligands initiates bidirectional signaling pathways that affect both receptor-expressing and ligand-expressing cells. Downstream signaling involves MAPK, PI3K/AKT, Src family kinases, and Rho GTPases, resulting in regulation of cytoskeletal dynamics, cell polarity, and migration. Through these mechanisms, EPHA2 contributes to embryonic development, angiogenesis, wound healing, and maintenance of epithelial architecture.

Aberrant EPHA2 expression and signaling have been implicated in numerous human diseases, particularly cancer.

Elevated EPHA2 levels have been reported in breast cancer, lung cancer, prostate cancer, ovarian cancer, glioblastoma, melanoma, and colorectal cancer, where the receptor is associated with tumor progression, invasion, metastasis, and resistance to therapy. Depending on cellular context, EPHA2 can exhibit both tumor suppressive and oncogenic activities. Consequently, EPHA2 has become an important therapeutic target and biomarker in oncology. Beyond cancer, mutations in EPHA2 are linked to congenital cataracts and other developmental abnormalities, emphasizing its significance in normal tissue morphogenesis.

EPHA2 signaling also plays essential roles in vascular biology and inflammatory responses. Interactions with growth factor receptors, integrins, and cadherins allow EPHA2 to coordinate cellular responses to extracellular cues and maintain tissue integrity. Because Eph receptors are activated by cell-cell contact rather than soluble ligands, they represent a unique class of receptor tyrosine kinases that govern tissue patterning and cellular communication.

EPHA2 Antibody / Receptor Tyrosine Kinase Antibody is useful for investigations of developmental biology, cancer progression, cell migration, angiogenesis, and signal transduction. Detection of endogenous EPHA2 provides a valuable tool for studies of receptor tyrosine kinase signaling and diseases associated with altered cellular communication.

Visit our Signal Transduction Antibodies page to explore antibodies against receptor tyrosine kinases and other signaling proteins that regulate cell migration, tissue organization, and cancer progression.

Application Notes

Optimal dilution of the EPHA2 Antibody / Receptor Tyrosine Kinase Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein corresponding to amino acids M851-N970 was used as the immunogen for the Eph Receptor A2 / EPHA2 antibody.

Storage

After reconstitution, the Eph Receptor A2 / EPHA2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Eph Receptor A2 Antibody, EPHA2 Antibody, Ephrin Type-A Receptor 2 Antibody, Epithelial Cell Kinase Antibody, ECK Antibody, Tyrosine Protein Kinase Receptor ECK Antibody, Ephrin Receptor Antibody