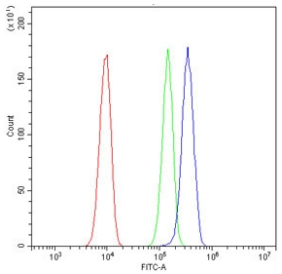
EPHB2 Antibody / Ephrin B Receptor Tyrosine Kinase Antibody (RQ6049)

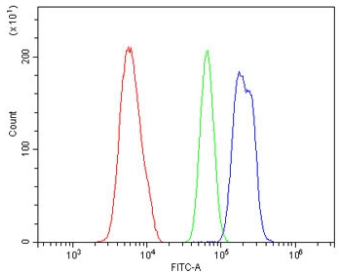
Catalog No.	Formulation	Size
RQ6049	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

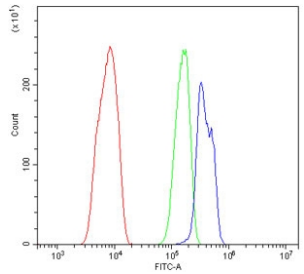
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P29323
RRID	AB_3754746
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 2-4ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This EPHB2 Antibody / Ephrin B Receptor Tyrosine Kinase Antibody is available for research use only.



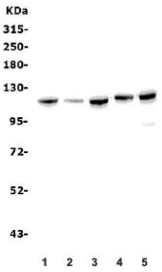
EPHB2 Antibody Detection in A549 Lung Cancer Cells FACS. Flow cytometry analysis of human A549 lung adenocarcinoma cells using EPHB2 Antibody at 1 ug/million cells following blocking with goat serum. The antibody-stained population (blue) shows a clear fluorescence shift relative to the isotype control (green) and unstained cells (red), demonstrating detection of Ephrin B receptor tyrosine kinase in A549 cells.



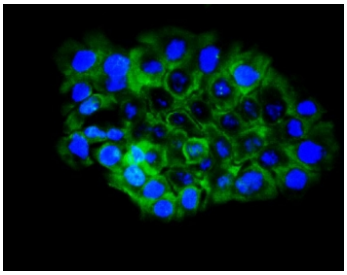
EPHB2 Antibody Detection in Mouse ANA-1 Macrophage Cells FACS. Flow cytometry analysis of mouse ANA-1 macrophage cells using EPHB2 Antibody at 1 ug/million cells following blocking with goat serum. The antibody-stained population (blue) shows a strong rightward fluorescence shift relative to the isotype control (green) and unstained cells (red), demonstrating detection of EPHB2 in mouse macrophage cells.



EPHB2 Antibody Detection in Rat C6 Glioma Cells FACS. Flow cytometry analysis of rat C6 glioma cells using EPHB2 Antibody at 1 ug/million cells following blocking with goat serum. The antibody-stained population (blue) shows a rightward fluorescence shift relative to the isotype control (green) and unstained cells (red), demonstrating recognition of EPHB2 in rat glioma cells.



EPHB2 Antibody Detection in Human Cancer Cell Lines WB. Western blot analysis of human U-87 MG (lane 1), A549 (lane 2), PC-3 (lane 3), Caco-2 (lane 4) and K562 (lane 5) cell lysates using EPHB2 Antibody. A prominent band is detected at approximately 117 kDa across the tested samples, consistent with the predicted molecular weight of Eph receptor B2. The results demonstrate endogenous EPHB2 detection across cancer cell lines of diverse biological origins.



EPHB2 Antibody Staining of A431 Epidermoid Carcinoma Cells IF. Immunofluorescence staining of FFPE human A431 epidermoid carcinoma cells using EPHB2 Antibody (green) with DAPI nuclear counterstain (blue). Heat-induced epitope retrieval was performed by steaming in pH 6 citrate buffer for 20 min. EPHB2 immunoreactivity is visible predominantly outside the nuclei, with prominent staining associated with the cell periphery and cytoplasm, demonstrating detection of the Ephrin B receptor tyrosine kinase in A431 cells.

Description

EPHB2 Antibody / Ephrin B Receptor Tyrosine Kinase Antibody detects EPH receptor B2 (EPHB2), a member of the Eph family of receptor tyrosine kinases. Eph receptors and their membrane-bound ephrin ligands form a cell-contact-dependent signaling system that helps regulate cell positioning, migration, adhesion and tissue organization. EPHB2 belongs to the EphB receptor subgroup and interacts primarily with ephrin-B ligands, enabling neighboring cells to exchange positional and developmental information through receptor-ligand engagement.

EPHB2 is a transmembrane protein composed of an extracellular ligand-binding region, a single membrane-spanning segment and an intracellular region containing a protein tyrosine kinase domain. Binding of ephrin ligands promotes receptor clustering and phosphorylation, initiating signaling pathways that influence cytoskeletal organization, cell adhesion and cellular movement. A distinctive feature of the Eph/ephrin system is its capacity for bidirectional signaling: EPHB2 can initiate forward signaling within the receptor-bearing cell, while membrane-bound ephrin-B ligands can transmit reverse signals into the opposing cell.

EPHB2 signaling contributes to the establishment and maintenance of tissue boundaries during development. It has important functions in nervous system organization, including axon guidance, neuronal connectivity and synaptic biology, and also participates in the organization of epithelial tissues. In the intestinal epithelium, EphB/ephrin-B signaling

contributes to spatial organization of proliferating and differentiating cell populations along the crypt-villus axis. These diverse functions make an EPHB2 Antibody relevant to studies of developmental signaling, neural biology, epithelial organization and cell-cell communication.

Altered EPHB2 expression and signaling are also investigated in cancer. Because Eph receptors regulate cell positioning, adhesion and migration, changes in EPHB2 activity can influence interactions between tumor cells and their surrounding tissue environment. Depending on cellular context and disease stage, EPHB2 has been associated with both growth-restrictive and tumor-promoting processes. Its expression and signaling have therefore been examined in colorectal, prostate, breast, brain and other cancers as researchers investigate how disruption of normal Eph/ephrin signaling contributes to malignant progression.

The Ephrin B Receptor Tyrosine Kinase Antibody can complement reagents directed against ephrin-B ligands, other Eph receptors and downstream signaling proteins when investigating this contact-dependent signaling network. Analysis of EPHB2 is particularly relevant when examining mechanisms that coordinate cellular position with changes in cytoskeletal organization, adhesion, migration and differentiation.

Researchers studying Eph receptor signaling and receptor tyrosine kinase pathways can explore additional targets on our Signal Transduction Antibodies page. NSJ Bioreagents provides antibodies for research into receptors and intracellular signaling pathways that regulate cellular behavior. An EPHB2 Antibody provides a research tool for detecting Eph receptor B2 and investigating Eph/ephrin signaling in development, tissue organization, neural biology and cancer research.

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Application Notes

Optimal dilution of the EPHB2 Antibody / Ephrin B Receptor Tyrosine Kinase Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids K278-K540) was used as the immunogen for the EPHB2 antibody.

Storage

After reconstitution, the EPHB2 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

EphB2 antibody, EPH receptor B2 antibody, Ephrin type-B receptor 2 antibody, Tyrosine-protein kinase receptor EPH-3 antibody, HEK5 antibody, ERK antibody

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