10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EphB2 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7623b

Specification

EphB2 Antibody (C-term) - Product Information

Application	**WB, IF, IHC-P,E**
Primary Accession	P29323
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**1021-1050**

EphB2 Antibody (C-term) - Additional Information

Gene ID 2048

Other Names
Ephrin type-B receptor 2, Developmentally-regulated Eph-related tyrosine kinase, ELK-related tyrosine kinase, EPH tyrosine kinase 3, EPH-like kinase 5, EK5, hEK5, Renal carcinoma antigen NY-REN-47, Tyrosine-protein kinase TYRO5, Tyrosine-protein kinase receptor EPH-3, EPHB2, DRT, EPHT3, EPTH3, ERK, HEK5, TYRO5

Target/Specificity
This EphB2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1021-1050 amino acids from the C-terminal region of human EphB2.

Dilution
WB~~1:1000
IF~~1:10~50
IHC-P~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
EphB2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

EphB2 Antibody (C-term) - Protein Information

Name EPHB2

Synonyms DRT, EPHT3, EPTH3, ERK, HEK5, TYRO5

Function Receptor tyrosine kinase which binds promiscuously transmembrane ephrin-B 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. Functions in axon guidance during development. Involved in the guidance of commissural axons, that form a major interhemispheric connection between the 2 temporal lobes of the cerebral cortex. Also involved in guidance of contralateral inner ear efferent growth cones at the midline and of retinal ganglion cell axons to the optic disk. In addition to axon guidance, also regulates dendritic spines development and maturation and stimulates the formation of excitatory synapses. Upon activation by EFNB1, abolishes the ARHGEF15-mediated negative regulation on excitatory synapse formation. Controls other aspects of development including angiogenesis, palate development and in inner ear development through regulation of endolymph production. Forward and reverse signaling through the EFNB2/EPHB2 complex regulate movement and adhesion of cells that tubularize the urethra and septate the cloaca. May function as a tumor suppressor. May be involved in the regulation of platelet activation and blood coagulation (PubMed:30213874).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell projection, axon. Cell projection, dendrite

Tissue Location
Brain, heart, lung, kidney, placenta, pancreas, liver and skeletal muscle. Preferentially expressed in fetal brain

EphB2 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

EphB2 Antibody (C-term) - Images

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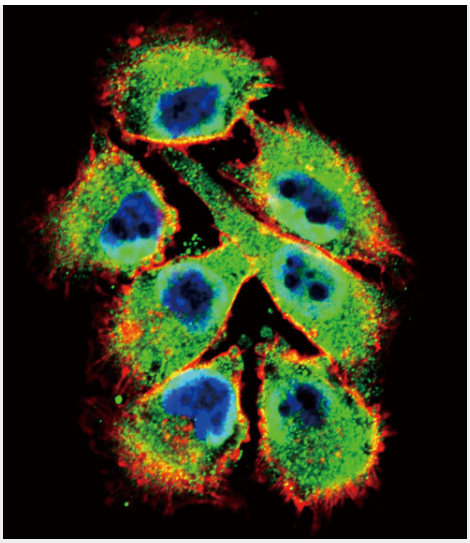
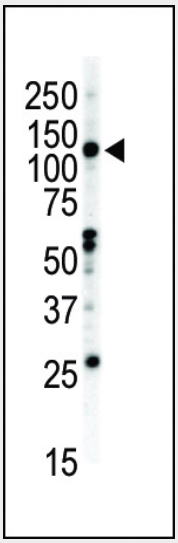
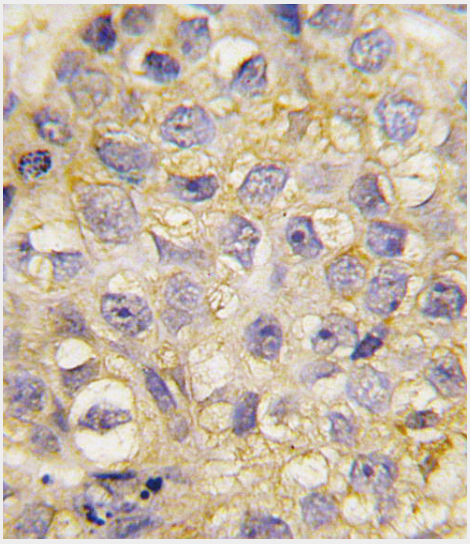


Confocal immunofluorescent analysis of EphB2 Antibody (C-term)(Cat#AP7623b) with A375 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).



Western blot analysis of anti-EphB2 C-term Pab (Cat. #AP7623b) in NCI-H460 cell lysate. EphB2 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.

Formalin-fixed and paraffin-embedded human breast carcinoma reacted with EphB2 Antibody (C-term)(Cat.#AP7623b), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with EphB2 antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

EphB2 Antibody (C-term) - Background

Ephrin receptors and their ligands, the ephrins, mediate numerous developmental processes, particularly in the nervous system. Based on their structures and sequence relationships, ephrins are divided into the ephrin-A (EFNA) class, which are anchored to the membrane by a glycosylphosphatidylinositol linkage, and the ephrin-B (EFNB) class, which are transmembrane proteins. The Eph family of receptors are divided into 2 groups based on the similarity of their extracellular domain sequences and their affinities for binding ephrin-A and ephrin-B ligands. Ephrin receptors make up the largest subgroup of the receptor tyrosine kinase (RTK) family. The ligand-activated form of EphB2, which belongs to the Tyr family of protein kinases, interacts with multiple proteins, including GTPase-activating protein (RASGAP) through its SH2 domain. It binds RASGAP through the juxtamembrane tyrosines residues, and also interacts with PRKCABP and

GRIP1 This type I membrane protein is expressed in brain, heart, lung, kidney, placenta, pancreas, liver and skeletal muscle. It is preferentially expressed in fetal brain. This protein contains putatively 2 fibronectin type III domains and 1 sterile alpha motif (SAM) domain.

EphB2 Antibody (C-term) - References

Thanos, C.D., et al., Science 283(5403):833-836 (1999).
Tang, X.X., et al., Oncogene 17(4):521-526 (1998).
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Iwase, T., et al., Biochem. Biophys. Res. Commun. 194(2):698-705 (1993).