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Anti-EPHB1/2/3 Antibody

Catalog # AP54091

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P54762
Other Accession	P29323, P54753
Reactivity	Human, Mouse, Rat, Zebrafish, Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	109885

Additional Information

Gene ID	2047
Other Names	EPHB1; ELK; EPHT2; HEK6; NET; Ephrin type-B receptor 1; ELK; EPH tyrosine kinase 2; EPH-like kinase 6; EK6; hEK6; Neuronally-expressed EPH-related tyrosine kinase; NET; Tyrosine-protein kinase receptor EPH-2; EPHB2; DRT; EPHT3; EPTH3; ERK; HEK5; TYRO5; 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; EPHB3; ETK2; HEK2; TYRO6; Ephrin type-B receptor 3; EPH-like tyrosine kinase 2; EPH-like kinase 2; Embryonic kinase 2; EK2; hEK2; Tyrosine-protein kinase TYRO6
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human EPHB1/2/3. The exact sequence is proprietary.
Dilution	WB~~1/500 - 1/1000 IHC~~1/50 - 1/200 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

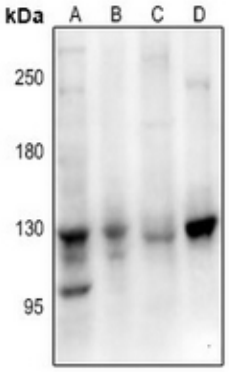
Name	EPHB1
Synonyms	ELK, EPHT2, HEK6, NET
Function	Receptor tyrosine kinase which binds promiscuously transmembrane ephrin-B family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while

the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Cognate/functional ephrin ligands for this receptor include EFNB1, EFNB2 and EFNB3. During nervous system development, regulates retinal axon guidance redirecting ipsilaterally ventrotemporal retinal ganglion cells axons at the optic chiasm midline. This probably requires repulsive interaction with EFNB2. In the adult nervous system together with EFNB3, regulates chemotaxis, proliferation and polarity of the hippocampus neural progenitors. In addition to its role in axon guidance also plays an important redundant role with other ephrin-B receptors in development and maturation of dendritic spines and synapse formation. May also regulate angiogenesis. More generally, may play a role in targeted cell migration and adhesion. Upon activation by EFNB1 and probably other ephrin-B ligands activates the MAPK/ERK and the JNK signaling cascades to regulate cell migration and adhesion respectively. Involved in the maintenance of the pool of satellite cells (muscle stem cells) by promoting their self-renewal and reducing their activation and differentiation (By similarity).

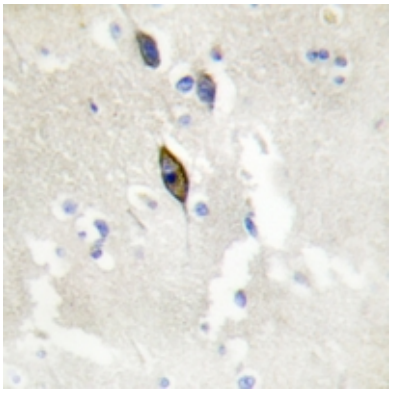
Cellular Location Cell membrane; Single-pass type I membrane protein Early endosome membrane. Cell projection, dendrite {ECO:0000250|UniProtKB:Q8CBF3}

Tissue Location Preferentially expressed in brain.

Images

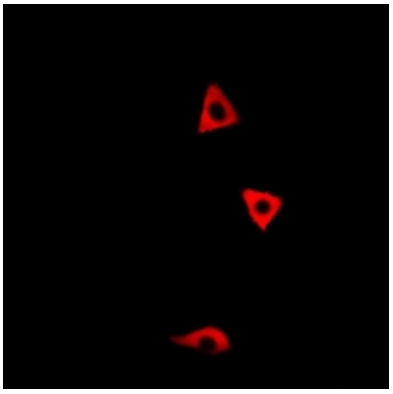


Western blot analysis of EPHB1/2/3 expression in A549 (A), HEK293T (B), mouse brain (C), rat heart (D) whole cell lysates. (Predicted band size: 109; 117; 110 kD; Observed band size: 130 kD)

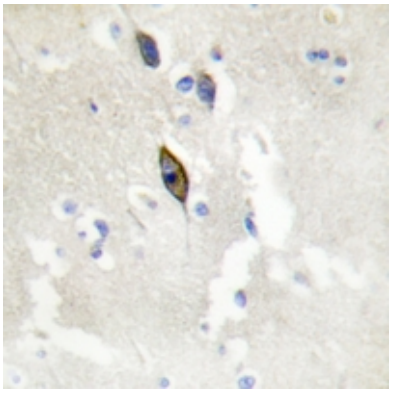


Immunohistochemical analysis of EPHB1/2/3 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of EPHB1/2/3 staining in NIH3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a Alexa Fluor 594-conjugated secondary



antibody (red) in PBS at room temperature in the dark.



Immunohistochemical analysis of EPHB1/2/3 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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