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EhpB1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1154a

Product Information

Application	WB, IHC, E
Primary Accession	P54762
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5F10A4
Isotype	IgG1
Calculated MW	109885
Description	EhpB1: EPH receptor B1. It is a receptor for ephrin-B family members. Ephrin receptors and their ligands, the ephrins, medate 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.
Immunogen	Purified recombinant fragment of EphB1 (aa19-133) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2047
Other Names	Ephrin type-B receptor 1, 2.7.10.1, ELK, EPH tyrosine kinase 2, EPH-like kinase 6, EK6, hEK6, Neuronally-expressed EPH-related tyrosine kinase, NET, Tyrosine-protein kinase receptor EPH-2, EPHB1, ELK, EPHT2, HEK6, NET
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EhpB1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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.

References

1. J Cell Sci. 2002 Aug 1;115(Pt 15):3073-81. 2. Proc Natl Acad Sci U S A. 2002 Jul 9;99(14):9219-24.

Images

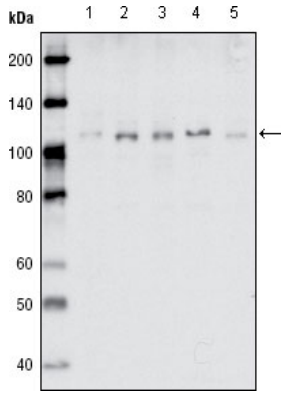


Figure 1: Western blot analysis using EhpB1 mouse mAb against MDA-MB-468 (1), MDA-MB-453 (2), MCF-7 (3), T47D (4) and SKBR-3 (5) cell lysate.

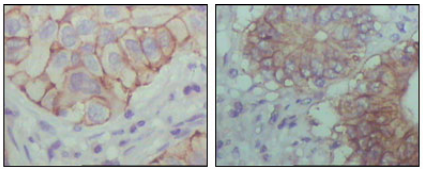


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (left) and colon cancer (right) showing cytoplasmic localization with DAB staining using EphB1 mouse mAb.

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