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EphB2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1166a

Product Information

Application	WB, ICC, E
Primary Accession	P29323
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2D12C6
Isotype	IgG2b
Calculated MW	117493
Description	EphB2: EPH receptor B2. 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 protein encoded by this gene is a receptor for ephrin-B family members.
Immunogen	Purified recombinant fragment of EphB2 (aa17-200) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2048
Other Names	Ephrin type-B receptor 2, 2.7.10.1, 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
Dilution	WB~~1/500 - 1/2000 ICC~~N/A 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	EphB2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

References

1. Nat Genet. 2004 Sep;36(9):979-83. 2. Pediatr Res. 2005 Apr;57(4):537-44.

Images

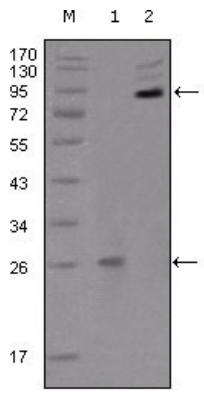
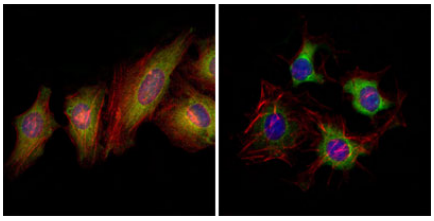


Figure 1: Western blot analysis using EphB2 mouse mAb against truncated EphB2 recombinant protein (1) and extracellular EphB2(aa19-476)-hIgGFc transfected CHO-K1 cell lysate(2).

Figure 2:Immunofluorescence analysis of Hela (left) and HepG2 (right) cells using EphB2 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin.



Blue: DRAQ5 fluorescent DNA dye.

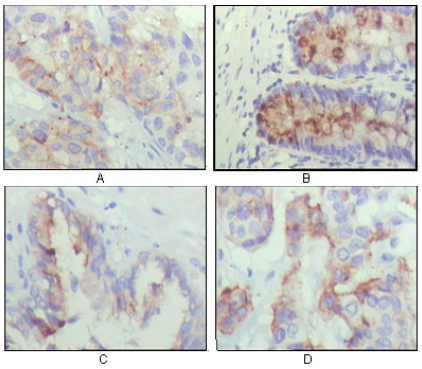


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (A), recturn(B), prostate (C), colon cancer (D) showing cytoplasmic localization using IGFBP2 mouse mAb with DAB staining.

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