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EPHB4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1275a

Product Information

Application	WB, ICC, E
Primary Accession	P54760
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5B5
Isotype	IgG1
Calculated MW	108270
Description	EphB4: EPH receptor B4, also known as Htk, Myk1, Tyro11. Entrez Protein: NP_004435. It is a member of the Eph receptor family, which bind the ephrin ligand family. 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. Ephrin receptors make up the largest subgroup of the receptor tyrosine kinase (RTK) family. The EphB4 protein binds to ephrin-B2 and plays an essential role in vascular development.
Immunogen	Purified recombinant extracellular fragment of human EPHB4 fused with hIgGFc tag expressed in HEK293 cell line.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2050
Other Names	Ephrin type-B receptor 4, 2.7.10.1, Hepatoma transmembrane kinase, Tyrosine-protein kinase TYRO11, EPHB4, HTK, MYK1, TYRO11
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	EPHB4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHB4
Synonyms	HTK, MYK1, TYRO11
Function	Receptor tyrosine kinase which binds promiscuously to 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. Together with its cognate ligand/functional ligand EFNB2, it is involved in the regulation of cell adhesion and migration, and plays a central role in heart morphogenesis, angiogenesis and blood vessel remodeling and permeability. EPHB4-mediated forward signaling controls cellular repulsion and segregation from EFNB2-expressing cells. Phosphorylates inactive tyrosine-protein kinase EPHB6 which promotes interaction of EPHB6 with SH2 domains, allowing it to recruit SH2 domain-containing signaling adapters (PubMed:34431498).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Abundantly expressed in placenta but also detected in kidney, liver, lung, pancreas, skeletal muscle and heart. Expressed in primitive and myeloid, but not lymphoid, hematopoietic cells. Also observed in cell lines derived from liver, breast, colon, lung, melanocyte and cervix.

References

1. Br J Cancer. 2007 Apr 10;96(7):1083-91. 2. Dig Liver Dis. 2007 Aug;39(8):725-32.

Images

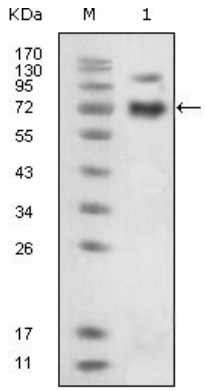


Figure 1: Western blot analysis using EphB4 mouse mAb against extracellular domain of human EphB4 (aa16-539).

Figure 2: Confocal immunofluorescence analysis of methanol-fixed HEK293 cells trasfected with EphB4-hIgGFc using EphB4 mouse mAb (green), showing membrane localization. Blue: DRAQ5 fluorescent DNA dye.

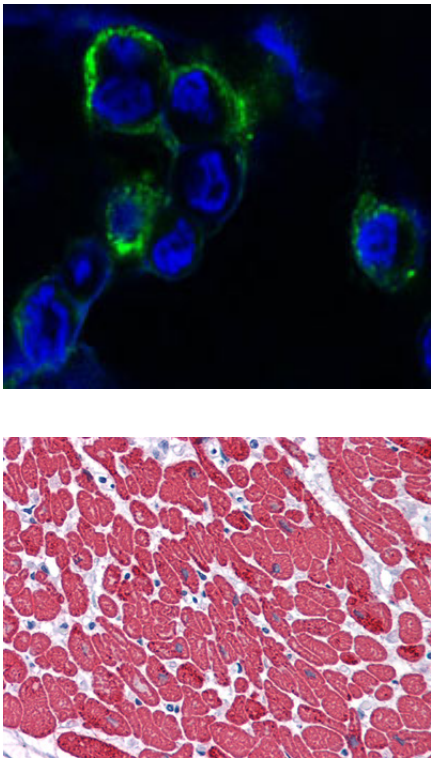


Figure 2: Immunohistochemical analysis of paraffin-embedded human Heart tissues using MYL3 mouse mAb.

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