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EPHB4 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM7625a

Product Information

Application	WB, E
Primary Accession	P54760
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1κ
Clone Names	67CT23.5.8
Calculated MW	108270

Additional Information

Gene ID	2050
Other Names	Ephrin type-B receptor 4, Hepatoma transmembrane kinase, Tyrosine-protein kinase TYRO11, EPHB4, HTK, MYK1, TYRO11
Target/Specificity	EPHB4 recombinant protein is used to produce this monoclonal antibody.
Dilution	WB~~1:200~2000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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	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.

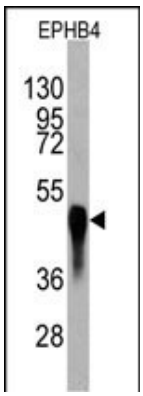
Background

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 protein encoded by this gene binds to ephrin-B2 and plays an essential role in vascular development.

References

Aberrant DNA methylation and epigenetic inactivation of Eph receptor tyrosine kinases and ephrin ligands in acute lymphoblastic leukemia. Kuang SQ, et al. Blood, 2010 Mar 25. PMID 20061560.
EPHB4 gene polymorphisms and risk of intracranial hemorrhage in patients with brain arteriovenous malformations. Weinsheimer S, et al. Circ Cardiovasc Genet, 2009 Oct. PMID 20031623.
BCR-ABL-independent and RAS / MAPK pathway-dependent form of imatinib resistance in Ph-positive acute lymphoblastic leukemia cell line with activation of EphB4. Suzuki M, et al. Eur J Haematol, 2010 Mar. PMID 20002159.
Treatment with ephrin B2 positively impacts the abnormal metabolism of human osteoarthritic chondrocytes. Kwan Tat S, et al. Arthritis Res Ther, 2009. PMID 19664212.
The ephrinB2/EphB4 axis is dysregulated in osteoprogenitors from myeloma patients and its activation affects myeloma bone disease and tumor growth. Pennisi A, et al. Blood, 2009 Aug 27. PMID 19597185.

Images



Western blot analysis of anti-EPHB4 Monoclonal Antibody (Cat.#AM7625a) by EPHB4 recombinant protein(Fragment). EPHB4 protein (arrow) was detected using the purified Mab.

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