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EphB4 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7625D

Product Information

Application	WB, IHC-P, E
Primary Accession	P54760
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
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	This EphB4 antibody is generated from rabbits immunized with human recombinant EphB4 protein.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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.

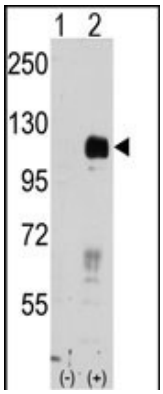
Background

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. EphB4 binds to ephrin-B2 and plays an essential role in vascular development.

References

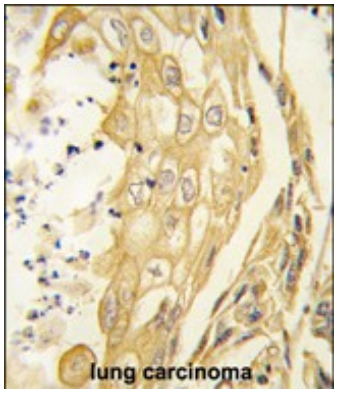
Steinle, J.J., et al., J. Biol. Chem. 277(46):43830-43835 (2002). Suenobu, S., et al., Biochem. Biophys. Res. Commun. 293(3):1124-1131 (2002). Wang, Z., et al., Blood 99(8):2740-2747 (2002). Wilson, M.D., et al., Nucleic Acids Res. 29(6):1352-1365 (2001). Wilkinson, D.G., Nat Rev Neurosci 2(3):155-164 (2001).

Images



Western blot analysis of EphB4 (arrow) using rabbit polyclonal EphB4 Antibody (Cat.#AP7625d).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the EphB4 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with the EphB4 antibody (Cat.#AP7625d), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Citations

- Eph/ephrin profiling in human breast cancer reveals significant associations between expression level and clinical outcome.
- PDGFRβ reverses EphB4 signaling in alveolar rhabdomyosarcoma.

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