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EphB3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7624a

Product Information

Application	WB, IHC-P, E
Primary Accession	P54753
Other Accession	P54754
Reactivity	Human, Rat, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1653
Calculated MW	110330
Antigen Region	29-59

Additional Information

Gene ID	2049
Other Names	Ephrin type-B receptor 3, EPH-like tyrosine kinase 2, EPH-like kinase 2, Embryonic kinase 2, EK2, hEK2, Tyrosine-protein kinase TYRO6, EPHB3, ETK2, HEK2, TYRO6
Target/Specificity	This EphB3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 29-59 amino acids from the N-terminal region of human EphB3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	EphB3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHB3
Synonyms	ETK2, HEK2, TYRO6

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. Generally has an overlapping and redundant function with EPHB2. Like EPHB2, functions in axon guidance during development regulating for instance the neurons forming the corpus callosum and the anterior commissure, 2 major interhemispheric connections between the temporal lobes of the cerebral cortex. 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 the formation of excitatory synapses. Controls other aspects of development through regulation of cell migration and positioning. This includes angiogenesis, palate development and thymic epithelium development for instance. Forward and reverse signaling through the EFNB2/EPHB3 complex also regulate migration and adhesion of cells that tubularize the urethra and septate the cloaca. Finally, plays an important role in intestinal epithelium differentiation segregating progenitor from differentiated cells in the crypt.
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell projection, dendrite
Tissue Location	Ubiquitous.

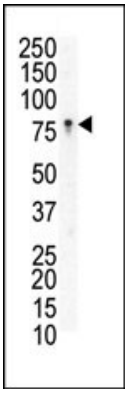
Background

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. EphB3, a member of the Tyr family of protein kinases, is a receptor for members of the ephrin-B family; it binds to both ephrin-B1 and -B2. Expression of this Type I membrane protein is ubiquitous. The protein contains putative domains for 2 fibronectin type III and 1 sterile alpha motif (SAM).

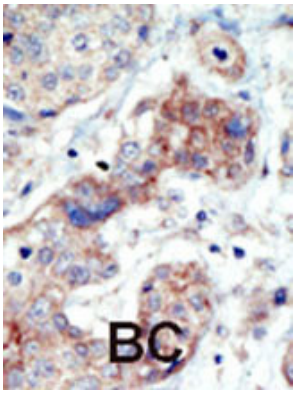
References

Bohme, B., et al., Oncogene 8(10):2857-2862 (1993).

Images



Western blot analysis of anti-EphB3 N-term Pab (Cat. #AP7624a) in Jurkat cell lysate. EphB3 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, 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. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Receptor Tyrosine Kinase EphB3: a Prognostic Indicator in Colorectal Carcinoma.
- EphB3 protein is associated with histological grade and FIGO stage in ovarian serous carcinomas.