10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EphA3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7608a

Product Information

Application	WB, IHC-P, E
Primary Accession	P29320
Other Accession	P29319
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB01584
Calculated MW	110131
Antigen Region	115-144

Additional Information

Gene ID	2042
Other Names	Ephrin type-A receptor 3, EPH-like kinase 4, EK4, hEK4, HEK, Human embryo kinase, Tyrosine-protein kinase TYRO4, Tyrosine-protein kinase receptor ETK1, Eph-like tyrosine kinase 1, EPHA3, ETK, ETK1, HEK, TYRO4
Target/Specificity	This EphA3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 115-144 amino acids from the N-terminal region of human EphA3.
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	EphA3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHA3
Synonyms	ETK, ETK1, HEK, TYRO4

Function	Receptor tyrosine kinase which binds promiscuously membrane- bound ephrin 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. Highly promiscuous for ephrin-A ligands it binds preferentially EFNA5. Upon activation by EFNA5 regulates cell-cell adhesion, cytoskeletal organization and cell migration. Plays a role in cardiac cells migration and differentiation and regulates the formation of the atrioventricular canal and septum during development probably through activation by EFNA1. Involved in the retinotectal mapping of neurons. May also control the segregation but not the guidance of motor and sensory axons during neuromuscular circuit development.
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein
Tissue Location	Widely expressed. Highest level in placenta.

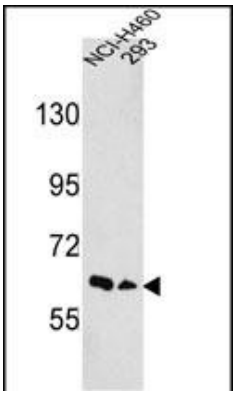
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The tyrosine kinase (TK) group is mainly involved in the regulation of cell-cell interactions such as differentiation, adhesion, motility and death. There are currently about 90 TK genes sequenced, 58 are of receptor protein TK (e.g. EGFR, EPH, FGFR, PDGFR, TRK, and VEGFR families), and 32 of cytosolic TK (e.g. ABL, FAK, JAK, and SRC families).

References

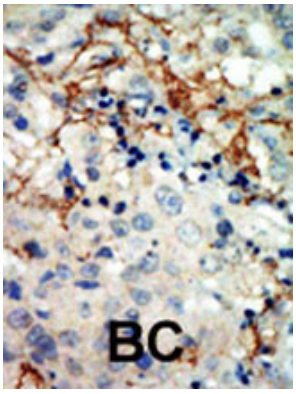
Chiari, R., et al., Cancer Res. 60(17):4855-4863 (2000). Wicks, I.P., et al., Proc. Natl. Acad. Sci. U.S.A. 89(5):1611-1615 (1992). Boyd, A.W., et al., J. Biol. Chem. 267(5):3262-3267 (1992).

Images



Western blot analysis of hEPHA3-D130 (Cat. #AP7608a) in NCI-H460,293 cell line lysates (35ug/lane). EPHA3 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical



relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.