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EphA1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7606b

Product Information

Application	WB, IHC-P, E
Primary Accession	P21709
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	108127
Antigen Region	913-943

Additional Information

Gene ID	2041
Other Names	Ephrin type-A receptor 1, hEpha1, EPH tyrosine kinase, EPH tyrosine kinase 1, Erythropoietin-producing hepatoma receptor, Tyrosine-protein kinase receptor EPH, EPHA1, EPH, EPHT, EPHT1
Target/Specificity	This EphA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 913-943 amino acids from the C-terminal region of human EphA1.
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	EphA1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHA1
Synonyms	EPH, EPHT, EPHT1
Function	Receptor tyrosine kinase which binds promiscuously membrane- bound

ephrin-A 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. Binds with a low affinity EFNA3 and EFNA4 and with a high affinity to EFNA1 which most probably constitutes its cognate/functional ligand. Upon activation by EFNA1 induces cell attachment to the extracellular matrix inhibiting cell spreading and motility through regulation of ILK and downstream RHOA and RAC. Also plays a role in angiogenesis and regulates cell proliferation. May play a role in apoptosis.

Cellular Location Cell membrane; Single-pass type I membrane protein

Tissue Location Overexpressed in several carcinomas.

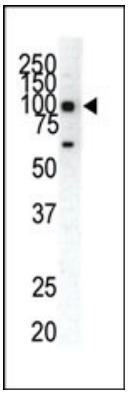
Background

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

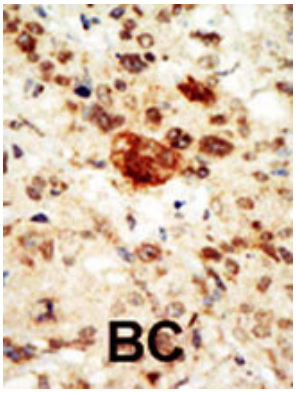
Hillier, L.W., et al., Nature 424(6945):157-164 (2003). Owshalimpur, D., et al., Mol. Cell. Probes 13(3):169-173 (1999). Hirai, H., et al., Science 238(4834):1717-1720 (1987).

Images



Western blot analysis of anti-EphA1 C-term Pab (Cat. #AP7606b) in HeLa cell lysate. EphA1 (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 AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Citations

- Downregulation of EphA1 in colorectal carcinomas correlates with invasion and metastasis.
- Expression of the EphA1 protein is associated with Fuhrman nuclear grade in clear cell renal cell carcinomas.
- Expression of EphA2 protein is positively associated with age, tumor size and Fuhrman nuclear grade in clear cell renal cell carcinomas.

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