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EphA7 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7612b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q15375
Other Accession	O42422
Reactivity	Human, Rat, Mouse
Predicted	Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	112097
Antigen Region	896-925

Additional Information

Gene ID	2045
Other Names	Ephrin type-A receptor 7, EPH homology kinase 3, EHK-3, EPH-like kinase 11, EK11, hEK11, EPHA7, EHK3, HEK11
Target/Specificity	This EphA7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 896-925 amino acids from the C-terminal region of human EphA7.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	EphA7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHA7
Synonyms	EHK3, HEK11
Function	Receptor tyrosine kinase which binds promiscuously GPI- anchored

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. Among GPI-anchored ephrin-A ligands, EFNA5 is a cognate/functional ligand for EPHA7 and their interaction regulates brain development modulating cell-cell adhesion and repulsion. Has a repellent activity on axons and is for instance involved in the guidance of corticothalamic axons and in the proper topographic mapping of retinal axons to the colliculus. May also regulate brain development through a caspase(CASP3)-dependent proapoptotic activity. Forward signaling may result in activation of components of the ERK signaling pathway including MAP2K1, MAP2K2, MAPK1 and MAPK3 which are phosphorylated upon activation of EPHA7.

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

Tissue Location Widely expressed.

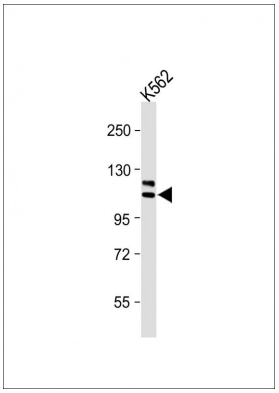
Background

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

Wilkinson, D.G., Nat Rev Neurosci 2(3):155-164 (2001). Xu, Q., et al., Philos. Trans. R. Soc. Lond., B, Biol. Sci. 355(1399):993-1002 (2000). Holder, N., et al., Development 126(10):2033-2044 (1999). Zhou, R., Pharmacol. Ther. 77(3):151-181 (1998). Fox, G.M., et al., Oncogene 10(5):897-905 (1995).

Images



All lanes : Anti-EphA7 Antibody (C-term) at 1:1000 dilution Lane 1: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 112kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- EphA7 regulates spiral ganglion innervation of cochlear hair cells.
- Eph/ephrin profiling in human breast cancer reveals significant associations between expression level and clinical outcome.
- Differential expression of EphA7 receptor tyrosine kinase in gastric carcinoma.