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

EPHA5 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM7610a

Product Information

Application	WB, IHC-P, E
Primary Accession	P54756
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1κ
Clone Names	46CT61.6.4
Calculated MW	114803

Additional Information

Gene ID	2044
Other Names	Ephrin type-A receptor 5, Brain-specific kinase, EPH homology kinase 1, EHK-1, EPH-like kinase 7, EK7, hEK7, EPHA5, BSK, EHK1, HEK7, TYRO4
Target/Specificity	Purified His-tagged EPHA5 protein(Fragment) was used to produced this monoclonal antibody.
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	EPHA5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHA5
Synonyms	BSK, EHK1, HEK7, TYRO4
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 most probably constitutes the cognate/functional ligand for EPHA5. Functions as an axon guidance molecule during development and may be involved in the development of the retinotectal, entorhino- hippocampal and hippocamposeptal pathways. Together with EFNA5 plays also a role in synaptic plasticity in adult brain through regulation of synaptogenesis. In addition to its function in the nervous system, the interaction of EPHA5 with EFNA5 mediates communication between pancreatic islet cells to regulate glucose-stimulated insulin secretion (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P54757}. Cell projection, dendrite
Tissue Location	Almost exclusively expressed in the nervous system in cortical neurons, cerebellar Purkinje cells and pyramidal neurons within the cortex and hippocampus. Display an increasing gradient of expression from the forebrain to hindbrain and spinal cord

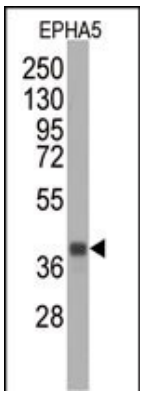
Background

This gene belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family. EPH and EPH-related receptors have been implicated in mediating developmental events, particularly in the nervous system. Receptors in the EPH subfamily typically have a single kinase domain and an extracellular region containing a Cys-rich domain and 2 fibronectin type III repeats. The ephrin 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. Two transcript variants encoding different isoforms have been found for this gene.

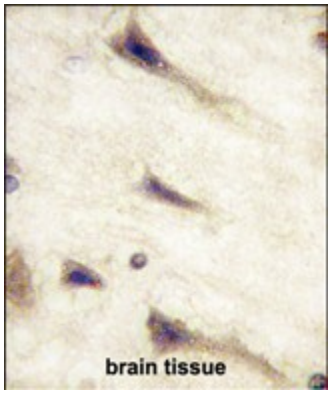
References

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.
Clinical significance of ephrin (eph)-A1, -A2, -a4, -a5 and -a7 receptors in pancreatic ductal adenocarcinoma. Giaginis C, et al. Pathol Oncol Res, 2010 Jun. PMID 19949912.
Frequent epigenetic inactivation of the receptor tyrosine kinase EphA5 by promoter methylation in human breast cancer. Fu DY, et al. Hum Pathol, 2010 Jan. PMID 19733895.
Over-expression of Eph and ephrin genes in advanced ovarian cancer: ephrin gene expression correlates with shortened survival. Herath NI, et al. BMC Cancer, 2006 Jun 1. PMID 16737551.
The LIFEdb database in 2006. Mehrle A, et al. Nucleic Acids Res, 2006 Jan 1. PMID 16381901.

Images



Western blot analysis of anti-EPHA5 Monoclonal Antibody (Cat.#AM7610a) by EPHA5 recombinant protein (Fragment). EPHA5 (Fragment) protein (arrow) was detected using the purified Mab.(1:2000)



Formalin-fixed and paraffin-embedded human brain tissue reacted with EPHA5 Monoclonal Antibody (Cat.#AM7610a), 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

- Differential expression of EphA5 protein in gastric carcinoma and its clinical significance.