

Anti-EPHA4 Reference Antibody (NIH patent anti-EPHA4)

Catalog # APR11405

Product Information

Application	Functional assay, Kinetics (SPR), Kinetics (BLI), FACS, E, FTA
Primary Accession	P54764
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	109860

Additional Information

Target/Specificity	EPHA4
Expression system	CHO

Protein Information

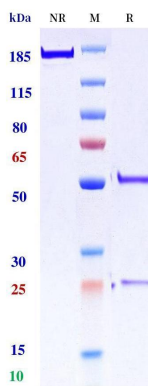
Name	EPHA4
Synonyms	HEK8, SEK, TYRO1
Function	Receptor tyrosine kinase which binds membrane-bound ephrin family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Highly promiscuous, it has the unique property among Eph receptors to bind and to be physiologically activated by both GPI- anchored ephrin-A and transmembrane ephrin-B ligands including EFNA1 and EFNB3. Upon activation by ephrin ligands, modulates cell morphology and integrin-dependent cell adhesion through regulation of the Rac, Rap and Rho GTPases activity. Plays an important role in the development of the nervous system controlling different steps of axonal guidance including the establishment of the corticospinal projections. May also control the segregation of motor and sensory axons during neuromuscular circuit development. In addition to its role in axonal guidance plays a role in synaptic plasticity. Activated by EFNA1 phosphorylates CDK5 at 'Tyr-15' which in turn phosphorylates NGEF regulating RHOA and dendritic spine morphogenesis. In the nervous system, also plays a role in repair after injury preventing axonal regeneration and in angiogenesis playing a role in central nervous system vascular formation. Additionally, its promiscuity makes it available to participate in a variety of cell-cell signaling regulating for instance the development of the thymic epithelium. During development of the cochlear organ of Corti, regulates pillar cell separation by forming a ternary complex with ADAM10 and CADH1 which facilitates the cleavage of CADH1 by ADAM10

and disruption of adherens junctions (By similarity). Phosphorylates CAPRIN1, promoting CAPRIN1-dependent formation of a membraneless compartment (By similarity).

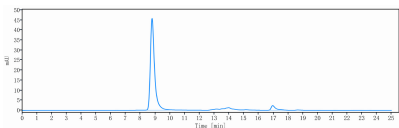
Cellular Location Cell membrane {ECO:0000250 | UniProtKB:Q03137}; Single-pass type I membrane protein {ECO:0000250 | UniProtKB:Q03137} Cell projection, axon {ECO:0000250 | UniProtKB:Q03137}. Cell projection, dendrite {ECO:0000250 | UniProtKB:Q03137}. Postsynaptic density membrane {ECO:0000250 | UniProtKB:Q03137}. Early endosome {ECO:0000250 | UniProtKB:Q03137}. Cell junction, adherens junction {ECO:0000250 | UniProtKB:Q03137}. Note=Clustered upon activation and targeted to early endosome. {ECO:0000250 | UniProtKB:Q03137}

Tissue Location Ubiquitous..

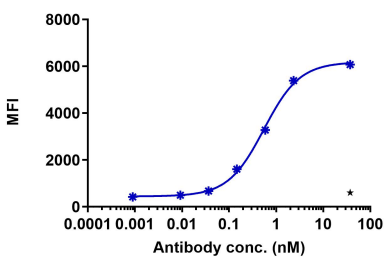
Images



Anti-EPHA4 Reference Antibody (NIH patent anti-EPHA4) on SDS-PAGE under reducing (R) condition. The purity of the protein is greater than 95%.



The purity of Anti-EPHA4 Reference Antibody (NIH patent anti-EPHA4) is 95%, determined by SEC-HPLC.



PLVX-puro-EPHA4-FL cell line were stained with NIH patent anti-EPHA4 and negative control protein respectively, washed and then followed by PE and analyzed with FACS, with the EC50 is 0.5506 nM.

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