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

Mouse Epha4 Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP13915c

Specification

Mouse Epha4 Antibody (Center) Blocking peptide - Product Information

Primary Accession Q03137

Mouse Epha4 Antibody (Center) Blocking peptide - Additional Information

Gene ID 13838

Other Names
Ephrin type-A receptor 4, Tyrosine-protein kinase receptor MPK-3, Tyrosine-protein kinase receptor SEK-1, Epha4, Sek, Sek1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13915c was selected from the Center region of Mouse Epha4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Epha4 Antibody (Center) Blocking peptide - Protein Information

Name Epha4

Synonyms Sek, Sek1

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 (PubMed:17719550). Plays an important role in the development of the nervous system controlling different steps of axonal

guidance including the establishment of the corticospinal projections (PubMed:9789074, PubMed:17719550, PubMed:17785183). May also control the segregation of motor and sensory axons during neuromuscular circuit developmen (PubMed:18403711). 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 (PubMed:17143272). 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 (PubMed:15537875, PubMed:16802330). Additionally, its promiscuity makes it available to participate in a variety of cell-cell signaling regulating for instance the development of the thymic epithelium (PubMed:16818734). 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 (PubMed:30639848). Phosphorylates CAPRIN1, promoting CAPRIN1- dependent formation of a membraneless compartment (PubMed:31439799).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell projection, axon. Cell projection, dendrite. Postsynaptic density membrane. Early endosome. Cell junction, adherens junction Note=Clustered upon activation and targeted to early endosome

Tissue Location
Expressed in inner and outer pillar cells of the organ of Corti (at protein level) (PubMed:30639848). Highest expression in the adult brain and retina and also detectable in kidney, lung, skeletal muscle and thymus. Not detected in heart and liver. Expressed in myogenic progenitor cells (PubMed:27446912)

Mouse Epha4 Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Mouse Epha4 Antibody (Center) Blocking peptide - Images

Mouse Epha4 Antibody (Center) Blocking peptide - Background

Receptor for members of the ephrin-A family. Binds to ephrin-A1, -A4 and -A5. Binds more poorly to ephrin-A2 and -A3. May play a role in a signal transduction process involved in hindbrain pattern formation.

Mouse Epha4 Antibody (Center) Blocking peptide - References

Kuwako, K., et al. Neuron 67(3):407-421(2010)Qu, Y., et al. J. Neurosci. 30(28):9392-9401(2010)Oginuma, M., et al. Development 137(9):1515-1522(2010)Xie, Z., et al. Proc. Natl. Acad. Sci. U.S.A. 107(14):6510-6515(2010)Galimberti, I., et al. Neuron 65(5):627-642(2010)