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Mouse Epha4 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20760c

Specification

Mouse Epha4 Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	Q03137
Other Accession	P54764
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**109814**

Mouse Epha4 Antibody (Center) - 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
This Mouse Epha4 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 309-342 amino acids from the Central region of human Mouse Epha4.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
Mouse Epha4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Epha4 Antibody (Center) - 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:17719550, PubMed:17785183, PubMed:9789074). 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) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Epha4 Antibody (Center) - Images

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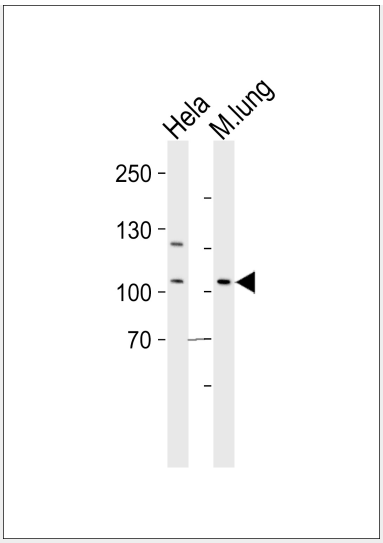

Western blot analysis of lysates from Hela cell line and mouse lung tissue lysate(from left to right), using Mouse Epha4 Antibody (Center)(Cat. #AP20760c). AP20760c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

Mouse Epha4 Antibody (Center) - Background

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. Beside 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, plays also 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.

Mouse Epha4 Antibody (Center) - References

Gilardi-Hebenstreit P.,et al.Oncogene 7:2499-2506(1992).
Gilardi-Hebenstreit P.,et al.Oncogene 8:1103-1103(1993).
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Ellis C.,et al.Oncogene 12:1727-1736(1996).