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

EphA3 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1204a

Specification

EphA3 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P54764
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2b**

Description
EphA3: EPH receptor A3. 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. This gene encodes a protein that binds ephrin-A ligands. Two alternatively spliced transcript variants have been described for this gene.

Immunogen
Purified recombinant fragment of EphA3 (aa751-983) expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

EphA3 Antibody - Additional Information

Gene ID 2043

Other Names
Ephrin type-A receptor 4, 2.7.10.1, EPH-like kinase 8, EK8, hEK8, Tyrosine-protein kinase TYRO1, Tyrosine-protein kinase receptor SEK, EPHA4, HEK8, SEK, TYRO1

Dilution
WB~~1/500 - 1/2000
IHC~~1:200~~1000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
EphA3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

EphA3 Antibody - 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..

EphA3 Antibody - 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

EphA3 Antibody - Images

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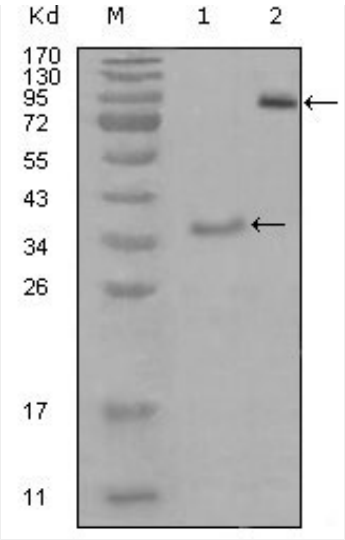

Figure 1: Western blot analysis using EphA3 mouse mAb against truncated Trx-EphA3 recombinant protein (1) and truncated EphA3(aa566-983)-hIgGFc transfected CHO-K1 cell lysate(2).

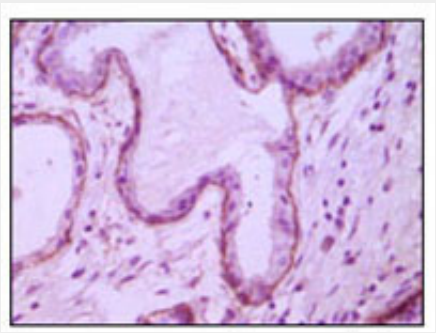

Figure 2: Immunohistochemical analysis of paraffin-embedded human breast ductal myoepithelium,showing cytoplasmic and membrane location with DAB staining using CD10 mouse mAb.

EphA3 Antibody - References

1. Nat Genet. 2004 Jan;36(1):40-5. 2. Cell. 2005 Oct 21;123(2):291-304.