

**EphA3 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1204a****Specification**

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**EphA3 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P54764</a>
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. <br />

**Formulation**

Ascitic fluid containing 0.03% sodium azide. <br />

**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 EFN3. 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**

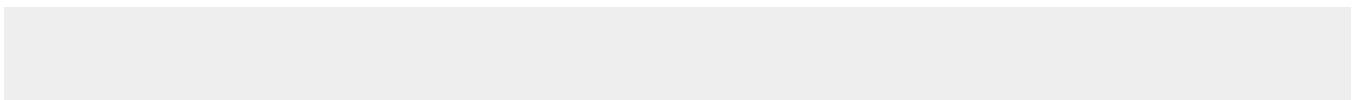
Ubiquitous..

## **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 Cytometry](#)
- [Cell Culture](#)

## **EphA3 Antibody - Images**



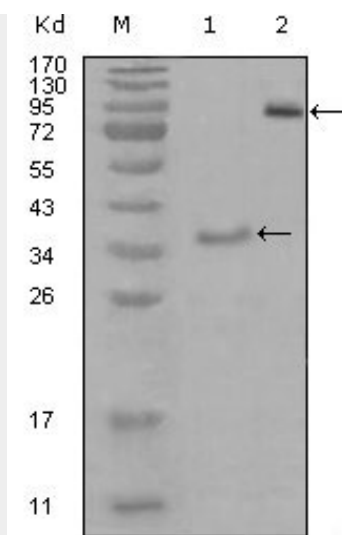


Figure 1: Western blot analysis using EphA3 mouse mAb against truncated Trx-EphA3 recombinant protein (1) and truncated EphA3(aa566-983)-hlgGfc transfected CHO-K1 cell lysate(2).

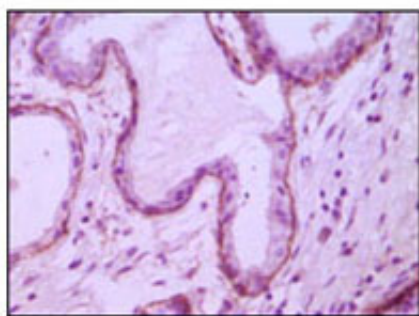


Figure 2: Immunohistochemical analysis of paraffin-embedded human breast ductal myoepithelium, showing cytoplasmic and membrane location with DAB staining using CD10 mouse mAb.

#### EphA3 Antibody - References

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