

DESCRIPTION

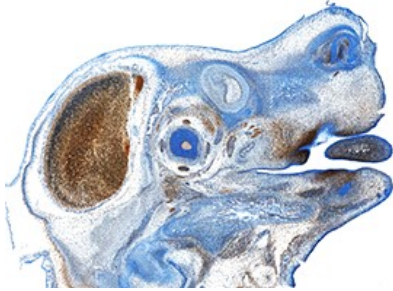
Species Reactivity	Mouse
Specificity	Detects mouse EphA3 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant mouse (rm) EphA4, rmEphA8, recombinant rat EphA5, and rmEphA6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphA3 Glu21-His541 (Thr323Ala, Glu476Gln) Accession # Q8BRB1
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse EphA3 Fc Chimera (Catalog # 640-A3)
Immunohistochemistry	5-15 µg/mL	See Below

DATA



Immunohistochemistry

EphA3 in Mouse Embryo.
EphA3 was detected in immersion fixed frozen sections of mouse embryo (13 d.p.c.) using Goat Anti-Mouse EphA3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF640) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to developing brain. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

EphA3, also known as Cek4, Mek4, Hek, Tyro4, and Hek4 (1), is a member of the Eph receptor family which binds members of the ephrin ligand family. There are two classes of receptors, designated A and B. Both the A and B class receptors have an extracellular region consisting of a globular domain, a cysteine-rich domain, and two fibronectin type III domains, followed by the transmembrane region and cytoplasmic region. The cytoplasmic region contains a juxtamembrane motif with two tyrosine residues, which are the major autophosphorylation sites, a kinase domain, and a conserved sterile alpha motif (SAM) in the carboxy tail which contains one conserved tyrosine residue. Activation of kinase activity occurs after ligand recognition and binding. EphA3 has been shown to bind ephrin-A5, ephrin-A2, ephrin-A3, ephrin-A1, ephrin-A4, and ephrin-B1 (2, 3). The extracellular domains of mouse and human EphA3 share greater than 96% amino acid identity. Only membrane-bound or Fc-clustered ligands are capable of activating the receptor *in vitro*. While soluble monomeric ligands bind the receptor, they do not induce receptor autophosphorylation and activation (2). *In vivo*, the ligands and receptors display reciprocal expression (3). It has been found that nearly all receptors and ligands are expressed in developing and adult neural tissue (3). The Eph/ephrin families also appear to play a role in angiogenesis (3).

References:

1. *Eph Nomenclature Committee [letter] (1997) Cell* **90**:403.
2. Flanagan, J.G. and P. Vanderhaegen (1998) *Annu. Rev. Neurosci.* **21**:309.
3. Pasquale, E.B. (1997) *Curr. Opin. Cell. Biol.* **9**:608.