

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EphA4 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human EphA4 is observed, and less than 5% cross-reactivity with recombinant mouse (rm) EphA3, rmEphA6, rmEphA7, and rmEphA8 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphA4 Val20-Thr547 Accession # Q03137
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 as a 0.2 µm filtered solution in PBS.

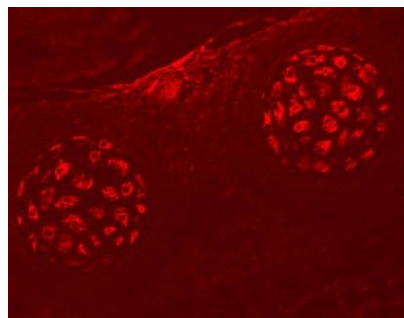
APPLICATIONS

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 EphA4 Fc Chimera (Catalog # 641-A4)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



EphA4 in Embryonic Rat Rib Cartilage Primordium. EphA4 was detected in immersion fixed frozen sections of embryonic rat rib cartilage primordium (E15) using 5 µg/mL Goat Anti-Mouse EphA4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF641) overnight at 4 °C. Tissue was stained (red). View our protocol for [Fluorescent 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

EphA4, also known as Sek, Sek1, Cek8, Hek8, and Tyro1 (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. This is 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. EphA4 has been shown to bind ephrin-A5, ephrin-A1, ephrin-A3, ephrin-A2, ephrin-B2, ephrin-B3, and ephrin-A4 (2, 3). The extracellular domains of mouse and human EphA4 share greater than 95% 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* **9**: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.