

Product Information

Anti-EphA6

Developed in Goat
Affinity Isolated Antibody

Product Number **E 4279**

Product Description

Anti-Mouse EphA6 is developed in goat using a purified recombinant mouse EphA6 extracellular domain expressed in mouse NSO cells as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-EphA6 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Mouse EphA6 recognizes recombinant mouse EphA6 by immunoblotting and ELISA. The antibody shows approximately 20-30% cross-reactivity with recombinant mouse EphA3, recombinant mouse EphA4, recombinant mouse EphA7, and recombinant mouse EphB8.

EphA6, also known as EHK2 and Hek12, is a member of the Eph receptor family, which binds members of the Ephrin ligand family. Two classes of receptors exist, designated A and B, that have an extracellular domain made up 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 is a juxtamembrane region with two tyrosines, the major autophosphorylation sites, along with a kinase domain, and a conserved sterile alpha motif (SAM) in the C-terminus, the latter including one conserved tyrosine.

The extracellular domains of mouse and rat EphA6 share approximately 99% amino acid identity. The calculated molecular mass of the reduced mouse EphA6/Fc monomer is approximately 86 kDa, but as a result of glycosylation, recombinant EphA6/Fc migrates as an approximately 100 kDa protein under reducing conditions in SDS-PAGE.

Ligand recognition and binding leads to kinase activation of the intrinsic kinase activity. EphA6 binds to Ephrin-A1, Ephrin-A2, Ephrin-A3, Ephrin-A4 and Ephrin-A5.^{1,2} Only membrane-bound or Fc-clustered ligands have been shown to activate the receptor *in vitro*. Soluble monomeric ligands bind the receptor, but

do not induce receptor autophosphorylation and activation.¹ The ephrin ligands and Eph receptors display reciprocal expression *in vivo*.² Developing and adult neural tissue express nearly all of the Eph receptors and ephrin ligands.² Ephs and ephrins play a significant role in angiogenesis.²

Reagent

Anti-Mouse EphA6 is supplied as 100 µg of antiserum lyophilized from a 0.2 µm filtered solution of phosphate buffered saline (PBS).

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of sterile phosphate buffered saline to produce a 0.1 mg/ml stock solution of antibody.

Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing. Do not store in frost-free freezer.

Product Profile

For immunoblotting, a working antibody concentration of 0.1-0.2 µg/ml is recommended. The detection limit for recombinant mouse EphA6 (Product No. E 8527) is approximately 10 ng/lane and 5 ng/lane under non-reducing and reducing conditions, respectively.

For ELISAs, a working antibody concentration of 0.5-1.0 µg/ml is recommended. The detection limit for recombinant mouse EphA6 (Product No. E 8527) is approximately 0.5 ng/well.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.

Endotoxin level is < 15 ng/mg antibody as determined by the LAL (Limulus amoebocyte lysate) method.

References

1. Flanagan, J.G. and P. Vanderhaegen, The ephrins and Eph receptors in neural development. *Annu. Rev. Neurosci.*, **21**, 309–345 (1998).
2. Pasquale, E.B., The Eph family of receptors. *Curr. Opin. Cell Biol.*, **9**, 608–615 (1997).

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