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ProductInformation

Anti-EphA8
Developed in Goat
Affinity Isolated Antibody

Product Number **E 4404**

Product Description

Anti-Mouse EphA8 is developed in goat using a purified recombinant mouse EphA8 extracellular domain expressed in mouse NSO cells as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-EphA8 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Mouse EphA8 recognizes recombinant mouse EphA8 by immunoblotting and ELISA. The antibody shows approximately 5% cross-reactivity with recombinant rat EphA5, recombinant mouse EphA2, recombinant mouse EphA3, recombinant mouse EphA6, recombinant mouse EphA7, and recombinant human EphA1.

EphA8, also known as Eek and Hek3, 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 calculated molecular mass of the reduced mouse EphA8/Fc monomer is 84.2 kDa, but as a result of glycosylation, recombinant EphB8/Fc migrates as an approximately 100-120 kDa protein under reducing conditions in SDS-PAGE.

Ligand recognition and binding leads to activation of the intrinsic kinase activity. EphA8 binds to Ephrin-A2, Ephrin-A3, and Ephrin-A5.[1, 2] Full length human and rat homolgs have not been successfully cloned. Only membrane-bound or Fc-clustered ligands have been shown to activate the receptor *in vitro*. Soluble monomeric ligands can 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 EphA8 is supplied as approximately 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 EphA8 (Prod. No. E 8777) is approximately 2 ng/lane under non-reducing and reducing conditions.

For ELISAs, a working antibody concentration of 0.5-1.0 µg/ml is recommended. The detection limit for recombinant mouse EphA8 (Prod. No. E 8777) is approximately 0.3 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 < 10 ng/mg antibody as determined by the LAL (Limulus amebocyte 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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