

Product Information

Anti-EphA7

produced in goat, affinity isolated antibody

Catalog Number **E4529**

Product Description

Anti-EphA7 is produced in goat using as immunogen purified recombinant mouse EphA7, extracellular domain, expressed in mouse NSO cells. Affinity isolated antibody is obtained from goat anti-EphA7 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-EphA7 recognizes recombinant mouse EphA7 by immunoblotting and ELISA. The antibody shows approximately 2% cross-reactivity with recombinant mouse EphA3 and less than 1% cross-reactivity with recombinant mouse EphA2, recombinant mouse EphA4, recombinant mouse EphA6, and recombinant mouse EphA8.

EphA7, also known as Mdk1, Hek11, Ehk3, Ebk, and Cek11, 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 human and mouse EphA7 share 97% amino acid identity. The calculated molecular mass of the reduced mouse EphA7/Fc monomer is 85.7 kDa, but as a result of glycosylation, recombinant EphA7/Fc migrates as an ~110 kDa protein under reducing conditions in SDS-PAGE.

Ligand recognition and binding leads to activation of the intrinsic kinase activity. EphA7 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 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

Supplied as ~100 µg of antiserum lyophilized from a 0.2 µm filtered solution of PBS with 5% trehalose.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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" freezers.

Product Profile

Immunoblotting: a working concentration of 0.1-0.2 µg/ml is recommended. The detection limit for recombinant mouse EphA7, Catalog Number E8652, is ~0.5 ng/lane under non-reducing and reducing conditions.

Indirect ELISA: a working concentration of 0.5-1.0 µg/ml is recommended. The detection limit for recombinant mouse EphA7 is ~0.6 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 < 0.1 EU/μg of 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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