

Product Information

Anti-Ephrin-A3

Developed in Goat
Affinity Isolated Antibody

Product Number **E 5279**

Product Description

Anti-Human Ephrin-A3 is developed in goat using purified recombinant human ephrin-A3 extracellular domain (Met 1-Ser 209) expressed in mouse NSO cells as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-ephrin-A3 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Human Ephrin-A3 recognizes recombinant human ephrin-A3 by immunoblotting and ELISA. The antibody shows no cross-reactivity (based on immunoblotting) with recombinant mouse ephrin-A1, recombinant mouse ephrin-A2, recombinant human ephrin-A4, recombinant mouse ephrin-B1, recombinant mouse ephrin-B2, and recombinant human ephrin-B3.

Ephrin-A3, also known as Ehk1-L, EFL-2, and LERK-3, is a member of the ephrin ligand family, which binds members of the Eph receptor family. All ligands share a conserved extracellular sequence, thought to correspond to the receptor binding domain. The conserved sequence contains approximately 125 amino acids including four invariant cysteines. A-class ligands have a GPI anchor following the conserved sequence. The calculated molecular mass of the reduced mouse ephrin-A3/Fc monomer is 47.7 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 90 kDa protein under reducing conditions in SDS-PAGE. The extracellular domains of human and mouse ephrin-A3 share 96% amino acid identity.

Ephrin-A3 binds EphA2, EphA3, EphA4, EphA5, EphA6, EphA7, EphA8, and EphB1.^{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

Anti-Human Ephrin-A3 is supplied as approximately 100 µg of antiserum lyophilized from a 0.2 µm filtered solution of phosphate buffered saline.

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 to 0.2 µg/ml is recommended. The detection limit for recombinant human ephrin-A3 (Prod. No. E 0278) is approximately 50 ng/lane under non-reducing and reducing conditions

For ELISAs, a working antibody concentration of 0.5 to 1.0 µg/ml is recommended. The detection limit for recombinant human ephrin-A3 (Prod. No. E 0278) is approximately 3.1 ng/well.

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

Endotoxin level is < 10 ng/mg of the antibody as determined by the LAL (*Limulus* ameocyte lysate) method.

References

1. Flanagan, J.G. and Vanderhaegen, P., 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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