

Product Information

Anti-EphB6

Developed in Goat
Affinity Isolated Antibody

Product Number **E 5029**

Product Description

Anti-Mouse EphB6 is developed in goat using a purified recombinant mouse EphB6 extracellular domain expressed in mouse NSO cells as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-EphB6 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Mouse EphB6 recognizes recombinant mouse EphB6 by immunoblotting and ELISA. The antibody shows no cross-reactivity with recombinant human EphA1, recombinant mouse EphA3, recombinant mouse EphA4, recombinant rat EphA5, recombinant mouse EphA6, recombinant mouse EphA7, recombinant mouse EphB1, recombinant mouse Ephrin-B2, and recombinant mouse Ephrin-B3.

EphB6, also known as Mep, 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 EphB6 share 92% amino acid identity. The calculated molecular mass of the reduced mouse EphB6/Fc monomer is 87.3 kDa, but as a result of glycosylation, recombinant EphB6/Fc migrates as an approximately 100 kDa protein under reducing conditions in SDS-PAGE.

EphB6 lacks intrinsic kinase activity,³ however, cross-linking of the Eph6 receptor leads to activation of the cellular kinase activity.⁴ EphB6 binds to Ephrin-B2 and Ephrin B3.⁵ 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 EphB6 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 EphB6 (Product No. E 9777) is approximately 10 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 EphB6 (Product No. E 9777) 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 amoebocyte lysate) method.

References

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2. Pasquale, E.B., The Eph family of receptors. *Curr. Opin. Cell Biol.*, **9**, 608–615 (1997).
3. Gurniak, C.B., and Berg, L.J., A new member of the Eph family of receptors that lacks protein tyrosine kinase activity. *Oncogene*, **13**, 777-786 (1996).
4. Luo, H., et al., Cross-linking of EphB6 resulting in signal transduction and apoptosis in Jurkat cells. *J. Immunol.*, **167**, 1362-1370 (2001).
5. Tang, X.X., et al., Implications of EPHB6, EFNB2, and EFNB3 expressions in human neuroblastoma. *Proc. Natl. Acad. Sci. USA*, **97**, 10936-10941 (2000).

kaa 02/03

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