

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Ephrin-B3 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse (rm) Ephrin-A1, rmEphrin-A2, recombinant human (rh) Ephrin-A3, rhEphrin-A4, rhEphrin-A5, rmEphrin-B1, and rmEphrin-B2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 88838
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Ephrin-B3 Leu28-Ser224 Accession # Q15768
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human Ephrin-B3 Fc Chimera (Catalog # 395-EB)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Ephrin-B3, also known as NLERK-2, Elk-L3, EFL-6, ELF-3 and LERK-8 (1), is a member of the Ephrin ligand family which binds members of the Eph receptor family. All ligands share a conserved extracellular sequence, which most likely corresponds to the receptor binding domain. This conserved sequence consists of approximately 125 amino acids (aa) and includes four invariant cysteines. The B-class ligands are transmembrane proteins which can be tyrosine phosphorylated upon receptor ligation. The cytoplasmic domains are approximately 80 aa long and are highly conserved, especially the last 33 aa. Several signaling molecules have been shown to interact with the cytoplasmic region, although specific signaling roles have yet to be elucidated. Ephrin-B3 has been shown to bind Ephrin-A4, Ephrin-B1, Ephrin-B2, and Ephrin-B3 (2, 3). The extracellular domains of murine and human Ephrin-B3 share 98% aa identity. Only membrane-bound or Fc-clustered ligands are capable of activating the receptor *in vitro*. While soluble monomeric ligands bind the receptor, they do not induce receptor autophosphorylation and activation (2). *In vivo*, the ligands and receptors display reciprocal expression (3). It has been found that nearly all the receptors and ligands are expressed in developing and adult neural tissue (3). The Ephrin/Eph families also appear to play a role in angiogenesis (3).

References:

1. *Eph Nomenclature Committee [letter]*. Cell (1997) **90**:403.
2. Flanagan, J.G. and P. Vanderhaeghen (1998) Annu. Rev. Neurosci. **21**:309.
3. Pasquale, E.B. (1997) Curr. Opin. Cell Biol. **9**:608.