Mouse Ephrin-B2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF496

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Ephrin-B2 in Western blots. In Western blots, less than 5% cross-reactivity with recombinant human Ephrin-A5 is observed and less than 1% cross-reactivity with recombinant mouse Ephrin-B1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Ephrin-B2 Arg27-Ala227 Accession # AAA82934
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

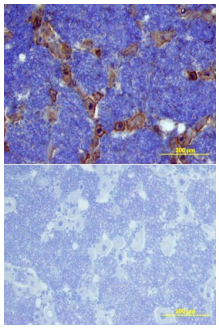
APPLICATIONS

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	0.1 µg/mL	Recombinant Mouse Ephrin-B2 Fc Chimera (Catalog # 496-EB)
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

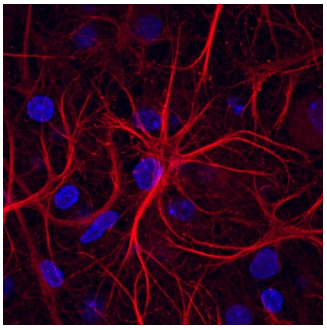
DATA

Immunohistochemistry



Ephrin-B2 in Rat Brain. Ephrin-B2 was detected in perfusion fixed frozen sections of rat brain (trigeminal ganglia) using Goat Anti-Mouse Ephrin-B2 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF496) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

Immunocytochemistry



Ephrin-B2 in Rat Hippocampal Neurons. Ephrin-B2 was detected in immersion fixed rat hippocampal neurons using Goat Anti-Mouse Ephrin-B2 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF496) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (red; Catalog # NL999) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and cell surface. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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-B2, also known as Htk-L, ELF-2, LERK-5, and NLERK-1 (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 and includes four invariant cysteines. The B-class ligands are transmembrane proteins which can become tyrosine phosphorylated upon receptor ligation. The cytoplasmic domains are approximately 80 amino acids long and are highly conserved, especially the last 33 amino acids. Several signaling molecules have been shown to interact with the cytoplasmic region, although specific signaling roles have yet to be elucidated. Ephrin-B2 has been shown to bind EphA4, EphB1, EphB2, EphB3, and EphB4 (2, 3). The extracellular domains of murine and human Ephrin-B2 share 98% amino acid 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]. (1997) Cell **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.

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