# Zebrafish Ephrin-B2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF1088

## DESCRIPTION

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| **Species Reactivity** | Zebrafish |
| **Specificity** | Detects zebrafish Ephrin-B2 in Western blots. In this format, less than 1% cross-reactivity with recombinant mouse (rm) Ephrin-B2, recombinant human (rh) Ephrin-A5, rmEphrin-A2, rhEphrin-B3, rhEphrin-A3, rhEphrin-A4, rmEphrin-A4, rmEphrin-A1 and rmEphrin B1 is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant zebrafish Ephrin-B2<br>Leu25-Ala222<br>Accession # O73874 |
| **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 Zebrafish Ephrin-B2 Fc Chimera (Catalog # 1088-B2) |

## PREPARATION AND STORAGE

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| **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.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

Ephrin-B2 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 be 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. 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. *In vivo*, the ligands and receptors display reciprocal expression, indicating a general function for Eph/ephrin signaling in defining spatial boundaries in the embryo. Ephrin-B2 has been shown to play a role in a variety of developmental processes, including arterial-venous differentiation, neural crest cell migration, and axon guidance. Zebrafish Ephrin-B2 shares 66% amino acid identity with mouse Ephrin-B2. In zebrafish embryos, EphA4 and Ephrin-B2 are expressed sequentially along the anteroposterior axis of the embryo within the presomitic and somitic mesoderm. It has been shown that interference with Eph signaling leads to loss or incorrect formation of somite boundaries and disruption of myogenic differentiation.

**References:**


1. Eph Nomenclature Committee (1997) Cell [letter] **90**(3):403.
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3. Pasquale, E.B. (1997) Curr. Opin. Cell Biol. **9**(5):608.
4. Durbin, L. *et al.* Genes & Dev. (1998) **12**:3096.
5. Adams, *et al.* Genes & Dev. (1999) **13**:295.




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