

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Zebrafish                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects zebrafish Ephrin-B2 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant mouse (rm) Ephrin-B2 is observed and less than 1% cross-reactivity with recombinant human (rh) Ephrin-A4, r                            |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant zebrafish Ephrin-B2<br>Leu25-Ala222<br>Accession # O73874                                                                                                                                                                   |
| <b>Conjugate</b>          | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## 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.

## PRODUCT SPECIFIC NOTICES

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