

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Mouse                                                                                                                                                                                                                                                 |
| <b>Specificity</b>                                                                                                                                                                                      | Detects mouse EphB4 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant mouse (rm) EphB6 and rmEphA3 is observed and less than 1% cross-reactivity with rmEphA2, rmEphA4, rmEphA6, rmEphA7, rmEp |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                                                                                                                                                                   |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                                                                                                                                                                             |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant mouse EphB4<br>Leu16-Ala539<br>Accession # P54761                                                                                                                                                     |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                   |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                                                                                                                                                          |
| *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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>CyTOF-ready</b>          | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Flow Cytometry</b>       | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

EphB4, also known as Htk, Myk1, Tyro11, and Mdk2 (1), is a member of the Eph receptor family which binds members of the ephrin ligand family. There are two classes of receptors, designated A and B. Both the A and B class receptors have an extracellular region consisting of a globular domain, a cysteine-rich domain, and two fibronectin type III domains. This is followed by the transmembrane region and cytoplasmic region. The cytoplasmic region contains a juxtamembrane motif with two tyrosine residues, which are the major autophosphorylation sites, a kinase domain, and a conserved sterile alpha motif (SAM) in the carboxy tail which contains one conserved tyrosine residue. Activation of kinase activity occurs after ligand recognition and binding. EphB4 has been shown to bind ephrin-B2 and ephrin-B1 (2, 3). The extracellular domains of human and mouse EphB4 share 88% 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 receptors and ligands are expressed in developing and adult neural tissue (3). The Eph/ephrin families also appear to play a role in angiogenesis (3).

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.