Human EphB6
Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 465327

Catalog Number: FAB33841V

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EphB6 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 465327
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human EphB6 Val17-Thr579 Accession # O15197
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	MOLT-4 human acute lymphoblastic leukemia cell line

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

EphB6, also known as Hep and Mep, is a 110 kDa member of the Eph receptor tyrosine kinase family. The A and B classes of Eph proteins are distinguished by ligand preference and have a common structural organization (1-4). The human EphB6 cDNA encodes a 1006 amino acid (aa) precursor that includes a 16 aa signal sequence, a 563 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 406 aa cytoplasmic domain. The ECD contains serine- and cysteine-rich regions and two fibronectin type-III domains. The cytoplasmic domain contains one non-catalytic protein kinase-like, one proline-rich, one SAM, and one PDZ-binding domain (5, 6). Within the ECD, human EphB6 shares 91% aa sequence identity with mouse and rat EphB6. It shares 38-45% aa sequence identity with human EphB1, 2, 3, 4, and 6. Human EphB5 has not been characterized. Two secreted splice variants have been described in mouse but not in human (6). EphB6 is primarily expressed in brain, pancreas, thymus, and peripheral T cells (5, 7, 8). EphB6 forms stable heterodimers with EphB1 and participates in signal transduction by association with other enzymatically active molecules (9-11). Ephrin-B2 is the dominant ligand for EphB6, although Ephrin-B1 and Ephrin-B3 can also trigger responses (12-14). High concentrations of Ephrin-B2 inhibit cell adhesion and migration as well as tyrosine phosphorylation of EphB6. Conversely, low concentrations of Ephrin-B2 promote adhesion and migration and do not lead to EphB6 phosphorylation (15). The level of EphB6 expression is inversely correlated with tumor aggressiveness in a variety of malignancies (1). EphB6 also functions as a T cell co-stimulatory molecule (8, 11, 13). EphB6 clusters with the T cell receptor and participates in the subsequent attenuation of the T cell response (8, 10, 11, 13).

References:

1. Surawska, H. *et al.* (2004) Cytokine Growth Factor Rev. **15**:419.
2. Poliakov, A. *et al.* (2004) Dev. Cell **7**:465.
3. Wu, J. and H. Luo (2005) Curr. Opin. Hematol. **12**:292.
4. Pasquale, E.B. (2005) Nat. Rev. Mol. Cell Biol. **6**:462.
5. Matsuoka, H. *et al.* (1997) Biochem. Biophys. Res. Commun. **235**:487.
6. Gurniak, C.B. and L.J. Berg (1996) Oncogene **13**:777.
7. Hafner, C. *et al.* (2004) Clin. Chem. **50**:490.
8. Luo, H. *et al.* (2002) J. Clin. Invest. **110**:1141.
9. Freywald, A. *et al.* (2002) J. Biol. Chem. **277**:3823.
10. Freywald, A. *et al.* (2003) J. Biol. Chem. **278**:10150.
11. Luo, H. *et al.* (2001) J. Immunol. **167**:1362.
12. Munthe, E. *et al.* (2000) FEBS Lett. **466**:169.
13. Luo, H. *et al.* (2004) J. Clin. Invest. **114**:1762.
14. Shimoyama, M. *et al.* (2002) Biochem. Biophys. Res. Commun. **298**:87.
15. Matsuoka, H. *et al.* (2005) J. Biol. Chem. **280**:29355.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human EphB6
Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 465327

Catalog Number: FAB33841V

100 µg

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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449