Human EphB6
Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 465327

Catalog Number: FAB33841T

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 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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:

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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

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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