

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EphB6 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse (rm) EphB6 is observed and less than 1% cross-reactivity with recombinant human (rh) EphB4 and rhEphA2
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human EphB6 Leu17 - Ser579 Accession # O15197
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	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

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).

PRODUCT SPECIFIC NOTICES

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