Human/Mouse EphB2 APC-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 512012

Catalog Number: FAB467A

100 TESTS

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse EphB2 in direct ELISAs.
Source	Monoclonal Rat IgG_{2A} Clone # 512012
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphB2 Val27-Lys548 (predicted) Accession # P54763
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied 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.

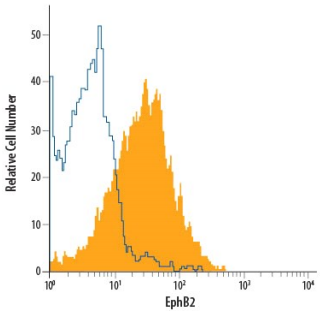
APPLICATIONS

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	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of EphB2 in COLO 205 Human Cell Line by Flow Cytometry. COLO 205 human colorectal adenocarcinoma cell line was stained with Rat Anti-Human/Mouse EphB2 APC-conjugated Monoclonal Antibody (Catalog # FAB467A, filled histogram) or isotype control antibody (Catalog # IC006A, open histogram). View our protocol for Staining Membrane-associated Proteins.

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

EphB2, also known as Cek5, Nuk, Erk, Qek2, Tyro5, Sek3, Hek5, and Drt (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 the 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. EphB2 has been shown to bind ephrin-B1, ephrin-B2, and ephrin-B3 (2, 3). The extracellular domains of human and mouse EphB2 share 99% amino acid identity. Only membrane-bound or Fc-clustered ligands are capable of activating the receptor *in vitro*. Soluble monomeric ligands bind the receptor but 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 the receptors and ligands are expressed in developing and adult neural tissue (3). The ephrin/Eph families also appear to play a role in angiogenesis (3).

References:

1. *Eph Nomenclature Committee [letter]* (1997) Cell **90:**403.
2. Flanagan, J.G. and P. Vanderhaeghen (1998) Annu. Rev. Neurosci. **21**:309.
3. Pasquale, E.B. (1997) Curr. Opin. Cell Biol. **9:**608.

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