

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EphA2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human EphA1, recombinant mouse (rm) EphA3, 4, 6, 7, 8, recombinant rat EphA5, rmEphB1, 2, 3, 4, or 6 is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 233720
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphA2 Ala22-Ala535 (predicted) Accession # AAA82113
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	D3 mouse embryonic stem cell line and HEK293 human embryonic kidney cell line transfected with mouse EphA2

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. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

EphA2, also known as Eck, Myk2, and Sek2 (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. EphA2 has been shown to bind ephrin-A3, ephrin-A1, ephrin-A5, ephrin-A4, and ephrin-A2 (2, 3). The extracellular domains of mouse and human EphA2 share greater than 92% 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).

References:

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

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