Mouse EphA2 Antibody

Monoclonal Rat IgG_{2B} Clone # 233720

Catalog Number: MAB639

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
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

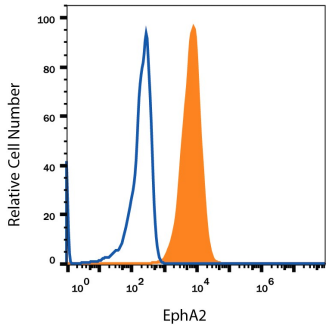
APPLICATIONS

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
Western Blot	1 µg/mL	Recombinant Mouse EphA2 Fc Chimera (Catalog # 639-A2) under non-reducing conditions only
Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

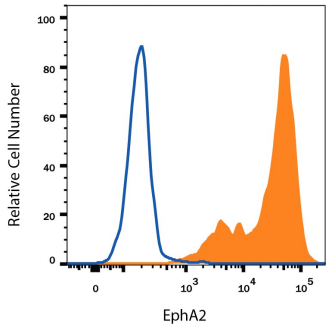
DATA

Flow Cytometry



Detection of EphA2 in D3 Mouse Cell Line by Flow Cytometry. D3 mouse embryonic stem cell line was stained with Rat Anti-Mouse EphA2 Monoclonal Antibody (Catalog # MAB639, filled histogram) or isotype control antibody (Catalog # MAB0061, open histogram), followed by Phycoerythrin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0105B). View our protocol for Staining Membrane-associated Proteins.

Flow Cytometry



Detection of EphA2 in HEK293 Human Cell Line Transfected with Mouse EphA2 by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with mouse EphA2 was stained with Rat Anti-Mouse EphA2 Monoclonal Antibody (Catalog # MAB639, filled histogram) or isotype control antibody (Catalog # MAB0061, open histogram), followed by Phycoerythrin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0105B). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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