Mouse EphA3 Alexa Fluor® 488-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 99437

Catalog Number: FAB640G

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EphA3 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) EphA1, recombinant mouse (rm) EphA2, A4, A6, A7,A8, recombinant rat (rr) EphA5, rrEphB1, rmEphB2, B3, or B6 is observe
Source	Monoclonal Rat IgG_{2A} Clone # 99437
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphA3 Glu21-Val541 (predicted) Accession # P29319
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.*

Western Blot	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

EphA3, also known as Cek4, Mek4, Hek, Tyro4, and Hek4 (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, 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. EphA3 has been shown to bind ephrin-A5, ephrin-A2, ephrin-A3, ephrin-A1, ephrin-A4, and ephrin-B1 (2, 3). The extracellular domains of mouse and human EphA3 share greater than 96% 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).

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