

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects mouse EphA5 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 15% cross-reactivity with recombinant mouse (rm) EphA3 is observed, 10% cross-reactivity with rmEphA7 is observed, 5% cross-reactivity
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphA5 Ser58-Pro412 Accession # Q60629
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

EphA5, also known as EHK1, BSK, CEK7, HEK7, and REK7, is a member of the Eph receptor tyrosine kinase family which binds members of the Ephrin ligand family (1-4). The A and B class Eph proteins have a common structural organization. Activation of kinase activity occurs after membrane-bound or clustered ligand recognition and binding. Reverse signaling is propagated through the Ephrin ligand. The mouse EphA5 cDNA encodes an 877 amino acid (aa) precursor that includes a 26 aa signal sequence, a 386 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 444 aa cytoplasmic domain (5). The ECD contains an N-terminal globular domain, a cysteine-rich domain, and two fibronectin type III domains. The cytoplasmic domain contains a juxtamembrane motif with two tyrosine residues, which are the major autophosphorylation sites, a kinase domain, and a conserved sterile alpha motif (SAM) (5). Taking into account differences in splice variants between species, comparable regions of the mouse EphA5 ECD share greater than 97% aa sequence identity with bovine, human, and rat EphA5, and 27-43% aa identity with mouse EphA1, 2, 3, 4, 6, 7, and 8. Multiple EphA5 splice variants exist and differ in their extracellular and intracellular sequences (5). Mouse EphA5 is expressed exclusively in brain with the highest levels in the hippocampus and limbic system (5). During embryonal development, EphA5 is preferentially expressed in neurons migrating away from the ventricular zone (5). The interaction of EphA5 with its ligands is also involved in the topographic projection of hippocampal, olfactory, and retinotectal neurons (6). Interference in this system by the transgenic expression of soluble EphA5 implicates hippocampal post-synaptic areas for native EphA5 function (7).

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