

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EphA1 in direct ELISAs and Western blots. In direct ELISAs, approximately 35% cross-reactivity with recombinant human EphA1 and less than 5% cross-reactivity with recombinant mouse (rm) EphA4, rmEphA6, and rmEphA7 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EphA1 Glu27-Glu548 Accession # AAH71215
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.
Immunohistochemistry	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

EphA1, also known as Eph and Esk, is a member of the Eph receptor tyrosine kinase family and binds several Ephrin-A ligands. The A and B class Eph proteins share a common structural organization (1-4). The mouse EphA1 cDNA encodes a 977 amino acid (aa) precursor that includes a 24 aa signal sequence, a 524 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 408 aa cytoplasmic domain. 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, 6). Within the ECD, mouse EphA1 shares 84% aa sequence identity with human EphA1, approximately 40% aa sequence identity with mouse EphA2, 3, 4, 6, 7, and 8, and 27% aa sequence identity with mouse EphA5. A splice variant of mouse EphA1 lacks the transmembrane segment and is predicted to exist as a soluble molecule (7). Membrane bound or clustered Ephrin ligands interact with EphA1 and activate its kinase domain which is capable of Ser, Thr, and Tyr phosphorylation (7). Reverse signaling is propagated through the Ephrin ligand. EphA1 is widely expressed in differentiated epithelial cells, particularly in bone marrow, spleen, thymus, and testes (5, 7). It is expressed on CD4⁺ T cells but not on CD19⁺ B cells (8). On T cells, EphA1 induces Tyr phosphorylation of PYK2 and promotes chemokine-induced chemotaxis (8). EphA1 is upregulated or downregulated in a variety of human carcinomas and is implicated in tumor invasiveness (2, 9, 10).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.