

Product datasheet for **TA328634**

Eph receptor A1 (EPHA1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KKEPRQLELTWAGSR, corresponding to amino acid residues 457-471 of human EphA1. Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	EPH receptor A1
Database Link:	NP_005223 Entrez Gene 13835 Mouse Entrez Gene 312279 Rat Entrez Gene 2041 Human P21709



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Background:

Eph receptors are the largest family of receptor tyrosine kinases (RTKs). EphA receptors (EphA1-10) bind ephrinA ligands which are GPI-linked proteins and EphB receptors (EphB1-6) bind ephrinB ligands which are membrane protein with one transmembrane domain. Within each subfamily, interactions between receptor and ligand are promiscuous. In addition, Eph receptors can also bind ephrins from the other class. Forward and reverse signaling through Eph receptors is a unique characteristic to this RTK since ephrins are physically linked to the plasma membrane. Structurally, Eph receptors contain an extracellular ligand-binding domain, a transmembrane domain and an intracellular C-terminal domain responsible for intracellular signaling. Forward Eph receptor signaling involves autophosphorylation of the receptor via a tyrosine kinase domain, as well as phosphorylation of other proteins. Known effectors of the forward signaling include Src kinase and Ras/Rho GTPases. Much less is known about the reverse signaling mediated by Eph receptors. Besides from acting independently, Eph receptors can also signal in concert with other receptors. For example, Eph receptors cooperate with FGF receptor, NMDA ligand-gated ion channel and chemokine G-protein coupled receptor. Biological activities attributed to the Eph receptor-ephrin signaling module include establishing neuronal connections, mediating neuronal plasticity and repair following neuronal injury. Eph receptors may also have a role in the immune system. Eph receptors are expressed in the developing nervous system, and in the adult brain. It is also detected in the pancreas, intestine, bone and lymphocytes. In cancer cells, Eph receptors and ephrins are overexpressed. They are also implicated in neurodegenerative disorders like Alzheimer's disease.

Synonyms:

EPH; EPHT; EPHT1

Note:

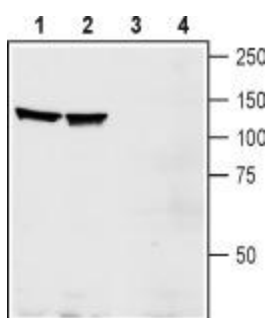
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

Protein Families:

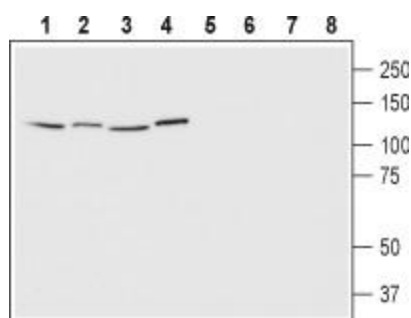
Druggable Genome, Protein Kinase, Transmembrane

Protein Pathways:

Axon guidance

Product images:


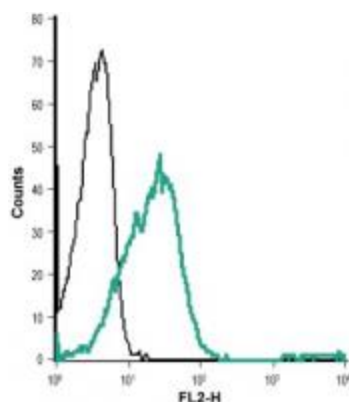
Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain membranes: 1, 2. Anti-EphA1 (extracellular) antibody, (1:200). 3, 4. Anti-EphA1 (extracellular) antibody, preincubated with the control peptide antigen.



Western blot analysis of human Jurkat T cell leukemia cells (lanes 1 and 5); human HeLa cervix adenocarcinoma cells (lanes 2 and 6); human SH-SY5Y neuroblastoma cells (lanes 3 and 7) and human MCF-7 breast adenocarcinoma cells (lanes 4 and 8): 1- 4. Anti-EphA1 (extracellular) antibody, (1:200). 5- 8. Anti-EphA1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of EphA1 in human MCF-7 cells. Immunocytochemical staining of live intact MCF-7 breast adenocarcinoma cells. Cells were stained with Anti-EphA1 (extracellular) antibody, (1:25) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Live image of the cells stained in A. C. Merge image of A and B.



Indirect flow cytometry analysis of live intact human Jurkat T cell leukemia cell line: black line, Unstained cells + goat-anti-rabbit-PE. Green line, Cells + Anti-EphA1 (extracellular) antibody, (1:20) + goat-anti-rabbit-PE.