

Anti-Eph receptor A5 antibody ab10612

概述

产品名称	Anti-Eph receptor A5抗体
描述	山羊多克隆抗体to Eph receptor A5
特异性	Ab10612 recognizes recombinant mouse and rat EphA5 and a customer reported no signal in mouse brain lysate. Therefore it appears the antibody is not suitable for detection of endogenous EphA5. The antibody shows approximately 15% cross-reactivity with recombinant mouse EphA3, recombinant mouse EphA4, recombinant mouse EphA6, recombinant mouse EphB7, recombinant mouse EphA8, and recombinant rat EphB1.
经测试应用	适用于: ELISA, WB
种属反应性	与反应: Mouse, Rat
免疫原	Purified recombinant rat EphA5 extracellular domain expressed in mouse NSO cells.
常规说明	Endotoxin level is < 0.15 EU (endotoxin units) per 1 µg antibody as determined by the LAL (Limulus amoebocyte lysate) method.

EphA5, also known as EHK1, BSK, CEK7, HEK7, and REK7, is a member of the Eph receptor family, which binds members of the Ephrin ligand family. Two classes of receptors exist, designated A and B, that have an extracellular domain made up 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 is a juxtamembrane region with two tyrosines, the major autophosphorylation sites, along with a kinase domain, and a conserved sterile alpha motif (SAM) in the C-terminus, the latter including one conserved tyrosine. The extracellular domains of rat and mouse EphA5 share approximately 98.5% amino acid identity. Rat EphA5 shares 96.5% amino acid homology with human EphA5. The calculated molecular mass of the reduced rat EphA5/Fc monomer is approximately 84 kDa, but as a result of glycosylation, recombinant EphA5/Fc migrates as an approximately 110 kDa protein under reducing conditions in SDS-PAGE. Ligand recognition and binding leads to kinase activation of the intrinsic kinase activity. EphA5 binds to Ephrin A1, Ephrin A2, Ephrin A3, Ephrin A4 and Ephrin A5. Only membrane-bound or Fc-clustered ligands have been shown to activate the receptor in vitro. Soluble monomeric ligands bind the receptor, but do not induce receptor autophosphorylation and activation. The ephrin ligands and Eph receptors display reciprocal expression in vivo. Developing and adult neural tissue express nearly all of the Eph receptors and ephrin ligands. Ephs and ephrins play a significant role in angiogenesis.

性能

形式	Liquid
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存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
存储溶液	Preservative: None Constituents: PBS
纯度	Immunogen affinity purified
纯化说明	Affinity isolated antigen specific antibody is obtained from goat anti- EphA5 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.
Primary antibody说明	EphA5, also known as Ehk1, Bsk, Cek7, Hek7, and Rek7, is a member of the Eph receptor family, which binds members of the Ephrin ligand family. Two classes of receptors exist, designated A and B, that have an extracellular domain made up 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 is a juxtamembrane region with two tyrosines, the major autophosphorylation sites, along with a kinase domain, and a conserved sterile alpha motif (SAM) in the C-terminus, the latter including one conserved tyrosine. The extracellular domains of rat and mouse EphA5 share approximately 98.5% amino acid identity. Rat EphA5 shares 96.5% amino acid homology with human EphA5. The calculated molecular mass of the reduced rat EphA5/Fc monomer is approximately 84 kDa, but as a result of glycosylation, recombinant EphA5/Fc migrates as an approximately 110 kDa protein under reducing conditions in SDS-PAGE. Ligand recognition and binding leads to kinase activation of the intrinsic kinase activity. EphA5 binds to Ephrin A1, Ephrin A2, Ephrin A3, Ephrin A4 and Ephrin A5. Only membrane-bound or Fc-clustered ligands have been shown to activate the receptor in vitro. Soluble monomeric ligands bind the receptor, but do not induce receptor autophosphorylation and activation. The ephrin ligands and Eph receptors display reciprocal expression in vivo. Developing and adult neural tissue express nearly all of the Eph receptors and ephrin ligands. Ephs and ephrins play a significant role in angiogenesis.
克隆	多克隆
同种型	IgG

应用

Our [Abpromise guarantee](#) covers the use of **ab10612** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
ELISA		Use a concentration of 0.5 - 1 µg/ml. The detection limit for recombinant rat EphA5 is approximately 1.3 ng/well.
WB		Use a concentration of 0.1 - 0.2 µg/ml. Predicted molecular weight: 110 kDa. The detection limit for recombinant rat EphA5 is approximately 25 ng/lane under non-reducing and reducing conditions.

靶标

功能 Receptor tyrosine kinase which binds promiscuously GPI-anchored ephrin-A family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling.

Among GPI-anchored ephrin-A ligands, EFNA5 most probably constitutes the cognate/functional ligand for EPHA5. Functions as an axon guidance molecule during development and may be involved in the development of the retinotectal, entorhino-hippocampal and hippocamoseptal pathways. Together with EFNA5 plays also a role in synaptic plasticity in adult brain through regulation of synaptogenesis. Beside its function in the nervous system, the interaction of EPHA5 with EFNA5 mediates communication between pancreatic islet cells to regulate glucose-stimulated insulin secretion.

组织特异性

Almost exclusively expressed in the nervous system in cortical neurons, cerebellar Purkinje cells and pyramidal neurons within the cortex and hippocampus. Display an increasing gradient of expression from the forebrain to hindbrain and spinal cord.

序列相似性

Belongs to the protein kinase superfamily. Tyr protein kinase family. Ephrin receptor subfamily. Contains 1 Eph LBD (Eph ligand-binding) domain. Contains 2 fibronectin type-III domains. Contains 1 protein kinase domain. Contains 1 SAM (sterile alpha motif) domain.

翻译后修饰

Phosphorylated. Phosphorylation is stimulated by the ligand EFNA5. Dephosphorylation upon stimulation by glucose, inhibits EPHA5 forward signaling and results in insulin secretion.

细胞定位

Cell membrane. Cell projection > axon. Cell projection > dendrite.

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