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INTERNATIONAL

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New Item

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Antibodies to Receptor Tyrosine kinases (EphrinB Receptor family members)

Anti-Ephrin 3 Receptor antibodies (EphR-301AP)

The membrane bound Ephrins are ligands for Ephrin receptor tyrosine kinases that regulate several physiological functions including long-term potentiation, cell positioning, CNS development and axonal path finding and mitogenesis etc. Ephrins molecules exhibit the ability to send bidirectional signals following ligand-receptor interactions resulting from cell-cell contacts. Activation of Eph receptors are also shown to regulate transduction pathways important in cell cycle control as well as cell death. There are at least 4 different kinds of Ephrin B receptors are cloned (Ephrin B1R-Ephrin B4R). EphB receptor tyrosine kinases and ephrin-B ligands also regulate several types of cell-cell interactions during brain development, generally by modulating the cytoskeleton. EphB/ephrinB genes are expressed in the developing neural tube of early mouse embryos with distinct overlapping expression in the ventral midbrain. The positioning of cells within the stem cell niche in the intestinal epithelium is controlled by B subclass ephrins through their interaction with EphB receptors. Ephrin 3 ligands are also known as guidance molecule as they are mainly responsible for positioning and directing the cell migration along the villus-crypt axis in intestine. Ephrin 3 by interacting with ephrin B3 receptors in conjunction with Wnt proteins signals and promotes cell cycle re-entry of proginator cells and accounts for 50% of the mitogenic activity. The Ephrin B receptors are the key coordinators of the intestinal stem cell niche (1).
Ephrin B3 ligands are highly expressed in the mossy fibers axons and terminals and the Ephrins B3 receptors are expressed on post-synaptic neurons. Ephrin-B3 promotes adhesion of hippocampal neurons to the ligand-expressing substrates in vitro, and the loss of the receptor or EphB2 abrogates the effects of ephrin-B3 (2). The function of Ephrins in the immune system has not been well studied, although some Ephrins and Ephrin receptors are expressed at high levels on certain leukocytes. EFNB3 and its cognate receptors are expressed in peripheral T cells and monocytes/macrophages. The role of EphR2 and EphR4 in angiogenesis and formation of arteries and veins come form findings that EphR2 marks arteries but not veins and conversely, the EphR4 labels exclusively the veins (3). .
The EphR3-selective antibodies were generated against highly antigenic epitopes unique to EphR3 receptor tyrosine kinase that are not present on other Ephrin B Receptor. The antibodies EphR3 are affinity purified over immobilized antigen based chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc., will also provide limited quantities of antigenic blocking peptides for EphR-301AP antibodies. FabGennix International Inc. also carries antibodies that are related to other Ephrin Receptor tyrosine kinase targets and BMP proteins, a complete list of all the antibodies please visit www. FabGennix.com. *FabGennix Inc*. will conjugate antibodies with enzymes or fluorescent probes as custom service upon request at a reasonable cost.

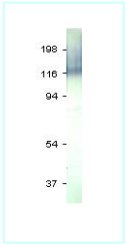
Catalog #	Host Species	Nature	Cross reactivity	Quantity	price
EphR-301AP	Rabbit	Affinity purifed Ephrin B3 Receptor antibodies	H	100 ug	235
P-EphR3	n/a	Antigeinc blocking peptides	H	250 ug	145
PC-EphR3	n/a	Western blot postive control for Ephrin B3	H	5 applications	175

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: Synthetic peptides corresponding to positions (aa 204-225) fir EphR-301AP antibody.

Concentration: EphR-301AP: IgG concentration 1-1.25 mg/ml in antibody stabilization buffer.

Applications: Antibody EphR-301AP is ideal for ELISA and WB applications for detection of EphR3 protein. This antibody does not cross react to EphR1, EphR2 or EphR3 receptors. The species cross reactivity for these antibodies have not been examined. The application of this antibody in IHC in not determined. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:750; IMM & i.p pull-down; n.d; IHC n.d.



Reactivity: This antibody detects a diffuse band of approximately 120kDa in PC-EphR3 Western blot positive control (Cat # PC-EphR3) samples. The antibody does not cross reacts with other proteins of the Ephrin receptor tyrosine kinases.

Protocols: Standard protocol for various applications (WB; IMM and IHC) of this antibody can be obtained by calling technical service hotline. The general information on this antibody is provided in the product specification sheet. FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

Form/Storage: The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20^{o}C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45μ filter after every use for long-term storage.

References:

1. Holmberg J, Genander M, Halford MM, Anneren C, Sondell M, Chumley MJ, Silvany RE, Henkemeyer M, Frisen J. EphB receptors coordinate migration and proliferation in the intestinal stem cell niche. Cell. 2006 Jun 16;125(6):1151-63.
2. Chen ZY, Sun C, Reuhl K, Bergemann A, Henkemeyer M, Zhou R. Abnormal hippocampal axon bundling in EphB receptor mutant mice. J Neurosci. 2004 Mar 10;24(10):2366-74.
3. Wang HU, Chen ZF, Anderson DJ. Molecular distinction and angiogenic interaction between embryonic arteries and veins revealed by ephrin-B2 and its receptor Eph-B4 Cell. 1998 May 29;93(5):741-53.

For users who may require large amounts of EphR-301AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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