

PDGF Receptor beta Antibody

Rabbit mAb Catalog # AP90193

Product Information

Application WB, IHC, IF, ICC, IP, IHF

Primary Accession P09619

Reactivity Rat, Human, Mouse

Clonality Monoclonal

Other Names JTK12; PDGFR; CD140B; PDGFR1; PDGFRB; kinase PDGFR-beta

IsotypeRabbit IgGHostRabbitCalculated MW123968

Additional Information

Dilution WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human PDGF Receptor beta

Description This gene encodes a cell surface tyrosine kinase receptor for members of the

platelet-derived growth factor family. These growth factors are mitogens for cells of mesenchymal origin. The identity of the growth factor bound to a receptor monomer determines whether the functional receptor is a homodimer or a heterodimer, composed of both platelet-derived growth

factor receptor alpha and beta polypeptides.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

Protein Information

Name PDGFRB

Synonyms PDGFR, PDGFR1

Function Tyrosine-protein kinase that acts as a cell-surface receptor for homodimeric

PDGFB and PDGFD and for heterodimers formed by PDGFA and PDGFB, and plays an essential role in the regulation of embryonic development, cell proliferation, survival, differentiation, chemotaxis and migration. Plays an essential role in blood vessel development by promoting proliferation, migration and recruitment of pericytes and smooth muscle cells to

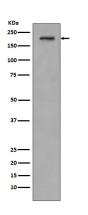
endothelial cells. Plays a role in the migration of vascular smooth muscle cells and the formation of neointima at vascular injury sites. Required for normal development of the cardiovascular system. Required for normal recruitment of pericytes (mesangial cells) in the kidney glomerulus, and for normal formation of a branched network of capillaries in kidney glomeruli. Promotes

rearrangement of the actin cytoskeleton and the formation of membrane ruffles. Binding of its cognate ligands - homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFD -leads to the activation of several signaling cascades; the response depends on the nature of the bound ligand and is modulated by the formation of heterodimers between PDGFRA and PDGFRB. Phosphorylates PLCG1, PIK3R1, PTPN11, RASA1/GAP, CBL, SHC1 and NCK1. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, mobilization of cytosolic Ca(2+) and the activation of protein kinase C. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to the activation of the AKT1 signaling pathway. Phosphorylation of SHC1, or of the C-terminus of PTPN11, creates a binding site for GRB2, resulting in the activation of HRAS, RAF1 and down-stream MAP kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes phosphorylation and activation of SRC family kinases. Promotes phosphorylation of PDCD6IP/ALIX and STAM. Receptor signaling is down-regulated by protein phosphatases that dephosphorylate the receptor and its down-stream effectors, and by rapid internalization of the activated receptor.

Cellular Location

Cell membrane; Single-pass type I membrane protein. Cytoplasmic vesicle. Lysosome lumen. Note=After ligand binding, the autophosphorylated receptor is ubiquitinated and internalized, leading to its degradation

Images



Western blot analysis of PDGF Receptor beta expression in SH-SY5Y cell lysate.

Image not found: 202311/AP90193-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human uterus, using PDGF Receptor beta Antibody.

Image not found: 202311/AP90193-IF.jpg

Immunofluorescent analysis of 3T3 cells, using PDGF Receptor beta Antibody.

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