



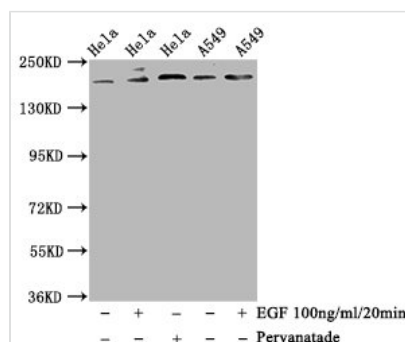
Phospho-PDGFRB (Y740) Recombinant Monoclonal Antibody

Product Code	CSB-RA017713A740phHU
Abbreviation	Platelet-derived growth factor receptor beta
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P09619
Immunogen	A synthesized peptide derived from Human Phospho-PDGFRB (Y740)
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	<p>Tyrosine-protein kinase that acts as 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 downstream 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.</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.



Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Platelet-derived growth factor receptor beta, PDGF-R-beta, Beta platelet-derived growth factor receptor, Beta-type platelet-derived growth factor receptor, CD140 antigen-like family member B, Platelet-derived growth factor receptor 1, PDGFR-1, CD140b, PDGFRB, PDGFR, PDGFR1
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular
Gene Names	PDGFRB
Clone No.	3B8

Image



Western Blot

Positive WB detected in HeLa whole cell lysate, A549 whole cell lysate (treated with EGF or Pervanadate)

All lanes Phospho-PDGFRB antibody at 1.14 µg/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 190 KDa

Observed band size: 190 KDa

Description

The phospho-PDGFRB (Y740) recombinant monoclonal antibody is a highly specific antibody against the human pY740-PDGFRB protein. This phosphorylated PDGFRB antibody was expressed through the clone of the DNA sequence encoding the pY740-PDGFRB monoclonal antibody into plasmids and subsequent transfection into cell lines. Its isotype matches with the rabbit IgG. This anti-pY740-PDGFRB antibody can be used in ELISA and WB applications and recognizes the human PDGFRB phosphorylated at Tyr 740 residue. It has been purified through affinity-chromatography.

When PDGF binds to the PDGFRB, it causes receptor tyrosine phosphorylation and the stable interaction of several signaling molecules, including PLC-gamma, the GAP, and PI3K. PDGFB and its receptor, PDGFRB, are necessary for the development of vascular mural cells such as pericytes and vascular smooth muscle cells. Three PDGFR tyrosine phosphorylation sites in the kinase insert domain have previously been identified as critical for the stable association of GAP and PI3K. Two of them, tyrosine Y740 and Y751, are necessary for PI3K stability, whereas Y771 is required for GAP binding.