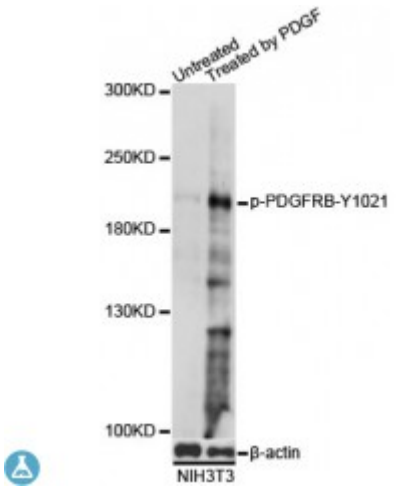
Anti-Phospho-PDGFRB-(Y1021) Antibody



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. This gene is flanked on chromosome 5 by the genes for granulocyte-macrophage colony-stimulating factor and macrophage-colony stimulating factor receptor; all three genes may be implicated in the 5-q syndrome. A translocation between chromosomes 5 and 12, that fuses this gene to that of the translocation, ETV6, leukemia gene, results in chronic myeloproliferative disorder with eosinophilia.

Model	STJ117913
Host	Rabbit
Reactivity	Mouse, Rat
Applications	WB
Immunogen	A synthetic phosphorylated peptide around Y1021 of human PDGFRB (NP_002600.1).
Gene ID	5159
Gene Symbol	PDGFRB
Dilution range	WB 1:500 - 1:2000
Purification	Affinity purification
Note	For Research Use Only (RUO).

Protein Name	Platelet-derived growth factor receptor beta PDGF-R-beta PDGFR-beta
Molecular Weight	123.968 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:8804OMIM:131440Reactome:R-HSA-1257604
Alternative Names	Platelet-derived growth factor receptor beta PDGF-R-beta PDGFR-beta
Function	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
Cellular Localization	Cell membrane
Post-translational Modifications	Autophosphorylated on tyrosine residues upon ligand binding, Autophosphorylation occurs in trans, i,e, one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit, Phosphorylation at Tyr-579, and to a lesser degree, at Tyr-581, is important for interaction with SRC family kinases, Phosphorylation at Tyr-740 and Tyr-751 is important for interaction with PIK3R1, Phosphorylation at Tyr-751 is important for interaction with NCK1, Phosphorylation at Tyr-771 and Tyr-857 is important for interaction with RASA1/GAP, Phosphorylation at Tyr-857 is important for efficient phosphorylation of PLCG1 and PTPN11, resulting in increased phosphorylation of AKT1, MAPK1/ERK2 and/or MAPK3/ERK1, PDCD6IP/ALIX and STAM, and in increased cell proliferation, Phosphorylation at Tyr-1009 is important for interaction with PTPN11, Phosphorylation at Tyr-1009 and Tyr-1021 is important for interaction with PLCG1, Phosphorylation at Tyr-1021 is important for interaction with CBL