

Rabbit PDGF Receptor beta Polyclonal Antibody | anti-PDGFbeta antibody

Phospho-PDGF Receptor beta (Tyr751) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329440	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (83%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

PDGF Receptor beta; Polyclonal Antibody; Phospho-PDGF Receptor beta (Tyr751) Antibody; Beta platelet derived growth factor receptor; Beta-type platelet-derived growth factor receptor; CD 140B; CD140 antigen-like family member B; CD140b; CD140b antigen; IBGC4; IMF1; JTK12; OTTHUMP00000160528; PDGF R beta; PDGF-R-beta; PDGFR 1; PDGFR; PDGFR beta; PDGFR1; PDGFRB; PGFRB_HUMAN; Platelet derived growth factor receptor 1; Platelet derived growth factor receptor beta; Platelet derived growth factor receptor beta polypeptide; anti-PDGFbeta antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (83%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-PDGF Receptor beta (Tyr751) Antibody detects endogenous levels of PDGF Receptor beta only when phosphorylated at Tyr751.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PDGFbeta antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PDGF Receptor beta around the phosphorylation site of Tyr751.
Conjugation	Unconjugated
Fragment	Fab fragment
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, PDGCD6IP/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; PLCG1 and CBL compete for the same binding site. Dephosphorylated by PTPRJ at Tyr-751, Tyr-857, Tyr-1009 and Tyr-1021. Dephosphorylated by PTPN2 at Tyr-579 and Tyr-1021. N-glycosylated. Ubiquitinated. After autophosphorylation, the receptor is polyubiquitinated, leading to its degradation.

Subunit Structure	Interacts with homodimeric PDGFB and PDGFD, and with heterodimers formed by PDGFA and PDGFB. May also interact with homodimeric PDGFC. Monomer in the absence of bound ligand. Interaction with homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFD, leads to receptor dimerization, where both PDGFRA homodimers and heterodimers with PDGFRB are observed. Interacts with SH2B2/APS. Interacts directly (tyrosine phosphorylated) with SHB. Interacts (tyrosine phosphorylated) with PIK3R1 and RASA1. Interacts (tyrosine phosphorylated) with CBL. Interacts (tyrosine phosphorylated) with SRC and SRC family kinases. Interacts (tyrosine phosphorylated) with PIK3C2B, maybe indirectly. Interacts (tyrosine phosphorylated) with SHC1, GRB7, GRB10 and NCK1. Interaction with GRB2 is mediated by SHC1. Interacts (via C-terminus) with SLC9A3R1.
Similarity	Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.
Subcellular 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.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohiostchemistry)

Staining Rat spleen tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of extracts from NIH/3T3 PDGF 50 ng/ml for 5 min, using Phospho-PDGF Receptor beta (Tyr751) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PDGFbeta antibody	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 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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4505683
NCBI GeneID	5159
NCBI Accession #	NP_002600.1
NCBI GenBank Nucleotide #	NM_002609.3
UniProt Accession #	P09619; Q8N5L4

Molecular Weight	123,968 Da
NCBI Official Full Name	platelet-derived growth factor receptor beta
NCBI Official Synonym Full Names	platelet-derived growth factor receptor, beta polypeptide
NCBI Official Symbol	PDGFRB
NCBI Official Synonym Symbols	IBGC4; JTK12; PDGFR; CD140B; PDGFR1; PDGFR-1
NCBI Protein Information	platelet-derived growth factor receptor beta; PDGFR-beta; PDGF-R-beta; CD140 antigen-like family member B; platelet-derived growth factor receptor 1; beta-type platelet-derived growth factor receptor
UniProt Protein Name	Platelet-derived growth factor receptor beta
UniProt Gene Name	PDGFRB
UniProt Synonym Gene Names	PDGFR; PDGFR1; PDGF-R-beta; PDGFR-beta; PDGFR-1
UniProt Entry Name	PGFRB_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/pdgf-receptor-beta-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329440>