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# Phospho-PDGFR beta (Tyr716) polyconal Antibody

Rabbit Polyclonal Antibody
Catalog # ABV11745

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | P16234 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Calculated MW** | 122670 |

## Additional Information

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| **Gene ID** | 5156 |
| **Application & Usage** | Western blot, Immunoblot: 0.5-2 □g/ml, ELISA |
| **Alias Symbol** | PDGFR |
| **Other Names** | PDGFRB; PDGFR; PDGFR1; Platelet-derived growth factor receptor 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 |
| **Appearance** | Colorless liquid |
| **Formulation** | 100 ug (1mg/ml) of antibody in 0.01M Tris-HCl, pH 8.0, 0.15M NaCl, and 0.02% sodium azide. |
| **Reconstitution & Storage** | -20 °C |
| **Background Descriptions** | |
| **Precautions** | Phospho-PDGFR beta (Tyr716) polyconal Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | PDGFRA |
| **Synonyms** | PDGFR2, RHEPDGFRA |
| **Function** | Tyrosine-protein kinase that acts as a cell-surface receptor for PDGFA, PDGFB and PDGFC and plays an essential role in the regulation of embryonic development, cell proliferation, survival and chemotaxis. Depending on the context, promotes or inhibits cell proliferation and cell migration. Plays an important role in the differentiation of bone marrow-derived mesenchymal |

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| | stem cells. Required for normal skeleton development and cephalic closure during embryonic development. Required for normal development of the mucosa lining the gastrointestinal tract, and for recruitment of mesenchymal cells and normal development of intestinal villi. Plays a role in cell migration and chemotaxis in wound healing. Plays a role in platelet activation, secretion of agonists from platelet granules, and in thrombin-induced platelet aggregation. Binding of its cognate ligands - homodimeric PDGFA, homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFC -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 PIK3R1, PLCG1, and PTPN11. 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. Phosphorylates PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and thereby mediates activation of the AKT1 signaling pathway. Mediates activation of HRAS and of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3 and STAT5A and/or STAT5B. 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. Cell projection, cilium {ECO:0000250\|UniProtKB:P26618}. Golgi apparatus {ECO:0000250\|UniProtKB:P26618} |
| **Tissue Location** | Detected in platelets (at protein level). Widely expressed. Detected in brain, fibroblasts, smooth muscle, heart, and embryo. Expressed in primary and metastatic colon tumors and in normal colon tissue. |

## Background

Platelet-derived growth factor (PDGF) refers to a family of disulphide-bonded dimeric isoforms that are important for growth and survival, and which function in several types of connective tissue cell. There are four members of the platelet-derived growth factor (PDGF) family: PDGF-A, PDGF-B, PDGF-C and PDGF-D (spinal cord-derived growth factor-B or iris-expressed growth factor). Their biological effects are mediated via two tyrosine kinase receptors, PDGFR-α and PDGFR-β. PDGF-mediated signaling is critical for development of many organ systems. PDGF-D has a two-domain structure similar to PDGF-C and is secreted as a disulphide-linked homodimer, PDGF-DD. Upon limited proteolysis, PDGF-DD is activated and becomes a specific agonistic ligand for PDGFR-β. PDGF-D is expressed in fibroblastic adventitial cells, cultured endothelial cells and in a variety of tumor cell lines.