

**Anti-PDGFR $\alpha$  Picoband Antibody**  
Catalog # ABO12457**Specification****Anti-PDGFR $\alpha$  Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P16234</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Platelet-derived growth factor receptor alpha(PDGFR $\alpha$ ) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-PDGFR $\alpha$  Picoband Antibody - Additional Information**

**Gene ID** 5156

**Other Names**

Platelet-derived growth factor receptor alpha, PDGF-R-alpha, PDGFR-alpha, 2.7.10.1, Alpha platelet-derived growth factor receptor, Alpha-type platelet-derived growth factor receptor, CD140 antigen-like family member A, CD140a antigen, Platelet-derived growth factor alpha receptor, Platelet-derived growth factor receptor 2, PDGFR-2, CD140a, PDGFRA, PDGFR2, RHEPDGFRA

**Calculated MW**

122670 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1  $\mu$ g/ml, Human, By Heat  
<br>Western blot, 0.1-0.5  $\mu$ g/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cell membrane ; Single- pass type I membrane protein . The activated receptor is rapidly internalized and degraded.

**Tissue Specificity**

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. .

**Protein Name**

Platelet-derived growth factor receptor alpha

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

### Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human PDGFRA (968-1002aa DFLKSDHPAVARMRVDSNAYIGVTYKNEEDKDKD), identical to the related mouse sequence, and different from the related rat sequence by one amino acid.

### Purification

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins.

### Storage

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

## Anti-PDGFR2 Picoband Antibody - Protein Information

**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 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

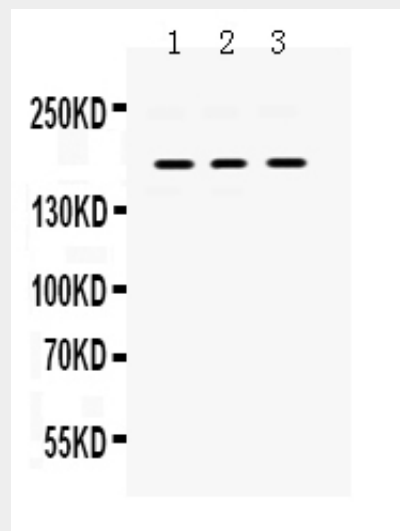
Detected in platelets (at protein level). Widely expressed. Detected in brain, fibroblasts, smooth muscle, heart, and embryo. Expressed in primary and metastatic colon tumors and in normal colon tissue.

## Anti-PDGFR $\alpha$ Picoband Antibody - Protocols

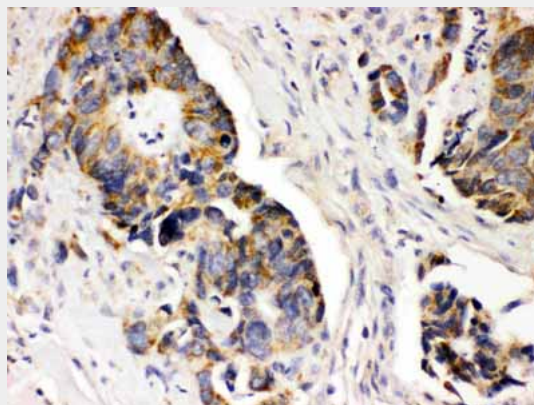
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-PDGFR $\alpha$ Picoband Antibody - Images



Anti- PDGFR $\alpha$  Picoband antibody, ABO12457, Western blotting  
All lanes: Anti PDGFR $\alpha$  (ABO12457) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: HELA Whole Cell Lysate at 40ug  
Lane 3: NIH3T3 Whole Cell Lysate at 40ug  
Predicted bind size: 180KD  
Observed bind size: 180KD



Anti- PDGFR $\alpha$  Picoband antibody, ABO12457, IHC(P)  
IHC(P): Human Intestinal Cancer Tissue

## Anti-PDGFR $\alpha$ Picoband Antibody - Background

PDGFR $\alpha$  (Platelet-derived growth factor receptor, alpha), also called PDGFR2, encodes a cell surface tyrosine kinase receptor for members of the platelet-derived growth factor family. The PDGFR $\alpha$  gene is mapped on 4q12. The PDGFR $\alpha$ -FIP1L1 gene is a constitutively activated tyrosine

kinase that transforms hematopoietic cells and is a therapeutic target of imatinib. And the PDGFRA gene contains 23 exons spanning about 65 kb. Using the human PDGFRA promoter linked to a luciferase reporter, Joosten et al. showed that PAX1 acts as a transcriptional activator of the PDGFRA gene in differentiated human embryonal carcinoma cells. PDGFRA is responsible for mediating cellular contraction of multiple growth factors: TGFB1 and members of the PDGF family. Lei et al. noted that in the rabbit model of the disease, PDGFRA is dramatically more capable of promoting PVR than is the closely related PDGFRB. PDGFRA is a critical receptor required for human CMV infection, and thus a target for novel antiviral therapies.