10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

Anti-PDGFRA Picoband Antibody

Catalog # ABO12457

Specification

Anti-PDGFRA Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P16234
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Platelet-derived growth factor receptor alpha(PDGFRA) 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-PDGFRA 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 µg/ml, Human, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

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 Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human PDGFRA (968-1002aa DFLKSDHPAVARMRVDSDNAYIGVTYKNEEDKLKD), 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 r˚Constitution, 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-PDGFRA 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.

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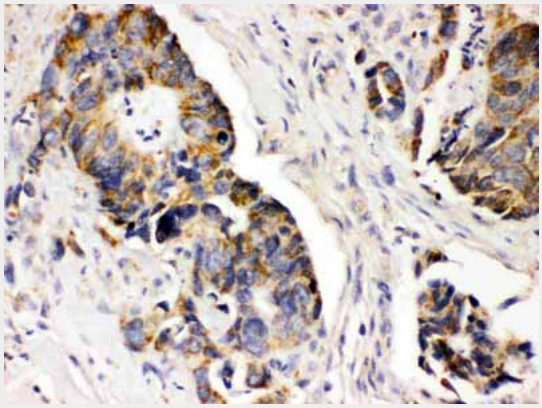
Anti-PDGFRA Picoband Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-PDGFRA Picoband Antibody - Images

Anti- PDGFRA Picoband antibody, ABO12457, Western blottingAll lanes: Anti PDGFRA (ABO12457) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: NIH3T3 Whole Cell Lysate at 40ugPredicted bind size: 180KDObserved bind size: 180KD



Anti- PDGFRA Picoband antibody, ABO12457, IHC(P)IHC(P): Human Intestinal Cancer Tissue

Anti-PDGFRA Picoband Antibody - Background

PDGFRA (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 PDGFA gene is mapped on 4q12. The PDGFRA-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.