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Rabbit Anti-PDGFRA antibody

SL10989R

Product Name:	PDGFRA
Chinese Name:	血小板源性生长因子受体A/PDGFRα抗体
Alias:	PDGF Receptor alpha; Platelet–dirived growth factor receptor-alpha; Alpha platelet derived growth factor receptor; CD 140a; CD140a; CD140a antigen; MGC74795; PDGF alpha chain; PDGF R alpha; PDGFR 2; PDGFR A; PDGFR alpha; PDGFR2; PDGFRA; Platelet derived growth factor receptor 2; Platelet derived growth factor receptor alpha; Platelet derived growth factor receptor alpha polypeptide; PGFRA_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Cow,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	117kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human PDGFRA:321-420/1089<Extracellular>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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. Studies suggest that this gene plays a role in organ development, wound healing, and tumor progression. Mutations in this gene have been associated with idiopathic hypereosinophilic syndrome, somatic and familial gastrointestinal stromal tumors, and a variety of other cancers. [provided by RefSeq, Mar 2012] **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. **Subunit:** Interacts with homodimeric PDGFA, PDGFB and PDGFC, and with heterodimers formed by PDGFA and PDGFB. Monomer in the absence of bound ligand. Interaction with dimeric PDGFA, PDGFB and/or PDGFC leads to receptor dimerization, where both PDGFRA homodimers and heterodimers with PDGFRB are observed. Interacts (tyrosine phosphorylated) with SHB (via SH2 domain). Interacts (tyrosine phosphorylated) with SHF (via SH2 domain). Interacts (tyrosine phosphorylated) with SRC (via SH2 domain). Interacts (tyrosine phosphorylated) with PIK3R1. Interacts (tyrosine phosphorylated) with PLCG1 (via SH2 domain). Interacts (tyrosine phosphorylated) with CRK, GRB2 and GRB7. Interacts with human cytomegalovirus/HHV-5 envelop glycoprotein B/gB.

Subcellular Location:
Cell membrane; Single-pass type I membrane protein. Note=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.

Post-translational modifications:
N-glycosylated.
Ubiquitinated, leading to its degradation (Probable).
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-731 and Tyr-742 is important for interaction with PIK3R1. Phosphorylation at Tyr-720 and Tyr-754 is important for interaction with PTPN11. Phosphorylation at Tyr-762 is important for interaction with CRK. Phosphorylation at Tyr-572 and Tyr-574 is important for interaction with SRC and SRC family members. Phosphorylation at Tyr-988 and Tyr-1018 is important for interaction with PLCG1.

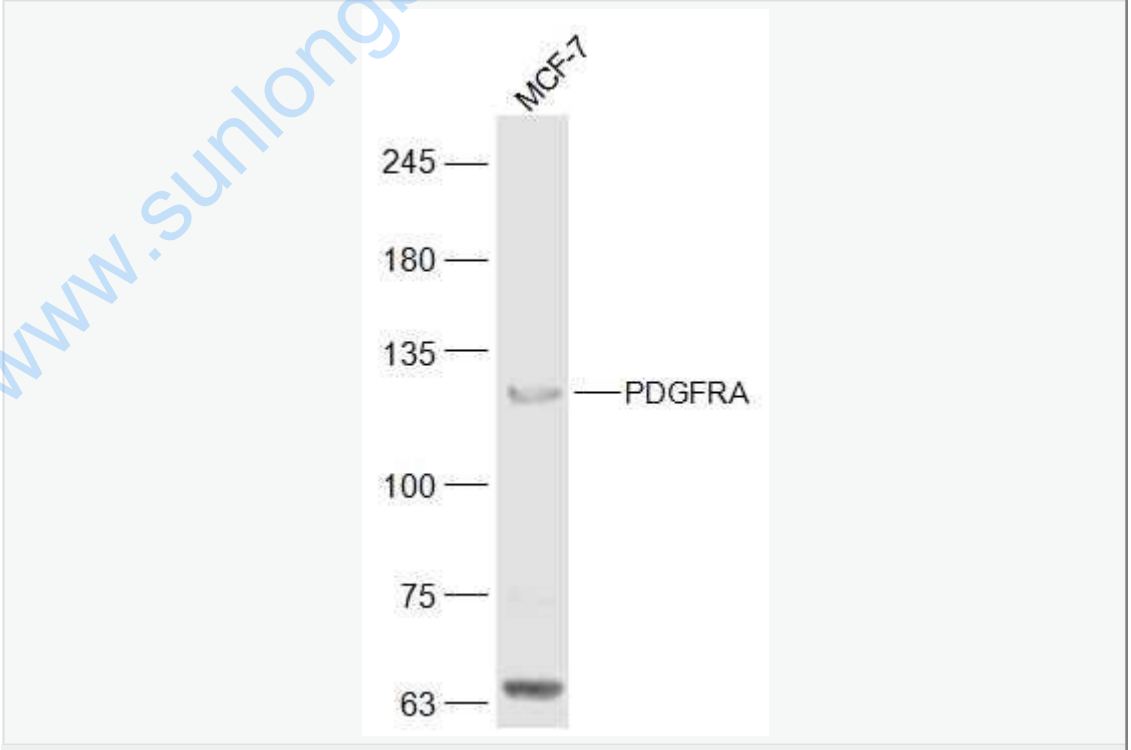
DISEASE:
Note=A chromosomal aberration involving PDGFRA is found in some cases of hypereosinophilic syndrome. Interstitial chromosomal deletion del(4)(q12q12) causes the fusion of FIP1L1 and PDGFRA (FIP1L1-PDGFRA). Mutations that cause overexpression and/or constitutive activation of PDGFRA may be a cause of hypereosinophilic syndrome.
Defects in PDGFRA are a cause of gastrointestinal stromal tumor (GIST) [MIM:606764]. Note=Mutations that cause constitutive activation of PDGFRA may be a cause of gastrointestinal stromal tumor (GIST).

Similarity:
Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.
Contains 5 Ig-like C2-type (immunoglobulin-like) domains.
Contains 1 protein kinase domain.

SWISS:
P16234

Gene ID:
5156

Database links:

	Entrez Gene: 5156Human Entrez Gene: 18595Mouse Entrez Gene: 25267Rat Omim: 173490Human SwissProt: P16234Human SwissProt: P26618Mouse SwissProt: P20786Rat Unigene: 74615Human Unigene: 221403Mouse Unigene: 55127Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Picture:	 Sample:

	MCF-7(Human) Cell Lysate at 30 ug Primary: Anti-PDGFRA (SL10989R) at 1/500 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 117 kD Observed band size: 117 kD