

Rabbit Anti-PDGF Receptor beta antibody

SL0232R

Product Name PDGF Receptor beta

Chinese Name 血小板源性生长因子受体 B/PDGFR β 抗体

Alias Platelet-derived growth factor receptor beta; CD140B; Beta platelet derived growth factor receptor; Beta-type platelet-derived growth factor receptor; CD 140B; CD140 antigen-like family member B; CD140B; CD140b antigen; JTK12; OTTHUMP00000160528; PDGF R beta; PDGF-R-beta; PDGFR; PDGFR1; PDGFRB; PGFRB_HUMAN; Platelet derived growth factor receptor beta polypeptide; PDGF Receptor beta; beta-type platelet-derived growth factor receptor precursor; PDGFR β ; PDGF R β ; PDGF Receptor β .

Research Area Tumour Cell biology Signal transduction Apoptosis Growth factors and hormones The cell membrane 受体

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human,Rat (predicted:Mouse,Dog,Cow)

Applications WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 118kDa

Cellular localization The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human PDGF-R-B: 981-1066/1106 <Cytoplasmic>

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.



Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed The PDGF Receptor Type A (Alpha platelet-derived growth factor receptor precursor, CD140a antigen), a 170kD protein, binds all three isoforms of PDGF with high affinity whereas the PDGF Receptor Type B, a 190kD protein, appears to bind only the PDGF BB homodimer with high affinity. Both receptors are transmembranous, ligand activated protein tyrosine kinases, which phosphorylate a number of important signal transduction proteins, which are bound with differential affinities via SH2 domains. The response of any given cell to PDGF will depend on the types of receptors displayed on the surface and isoforms of PDGF present in the extracellular environment.
Product Detail	Function: Receptor that binds specifically to PDGFB and PDGFD and has a tyrosine-protein kinase activity. Phosphorylates Tyr residues at the C-terminus of PTPN11 creating a binding site for the SH2 domain of GRB2.
	Subunit: 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. 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.
	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.
	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, PDCD6IP/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. N-glycosylated. Ubiquitinated. After autophosphorylation, the receptor is polyubiquitinated, leading to its degradation.

DISEASE:

Note=A chromosomal aberration involving PDGFRB is found in a form of chronic myelomonocytic leukemia (CMML). Translocation t(5;12)(q33;p13) with EVT6/TEL. It is characterized by abnormal clonal myeloid proliferation and by progression to acute myelogenous leukemia (AML).

Note=A chromosomal aberration involving PDGFRB may be a cause of acute myelogenous leukemia. Translocation t(5;14)(q33;q32) with TRIP11. The fusion protein may be involved in clonal evolution of leukemia and eosinophilia.

Note=A chromosomal aberration involving PDGFRB may be a cause of juvenile myelomonocytic leukemia. Translocation t(5;17)(q33;p11.2) with SPECC1.

Defects in PDGFRB are a cause of myeloproliferative disorder chronic with eosinophilia (MPE) [MIM:131440]. A hematologic disorder characterized by malignant eosinophils proliferation. Note=A chromosomal aberration involving PDGFRB is found in many instances of myeloproliferative disorder chronic with eosinophilia. Translocation t(5;12) with ETV6 on chromosome 12 creating an PDGFRB-ETV6 fusion protein. Translocation t(5;15)(q33;q22) with TP53BP1 creating a PDGFRB-TP53BP1 fusion protein.

Note=A chromosomal aberration involving PDGFRB may be the cause of a myeloproliferative disorder (MBD) associated with eosinophilia. Translocation t(1;5)(q23;q33) that forms a PDE4DIP-PDGFRB fusion protein.

Note=A chromosomal aberration involving PGFRB is found in a patient with T-lymphoblastic lymphoma (T-ALL) and an associated myeloproliferative neoplasm (MPN) with eosinophilia. Translocation t(5;6)(q33-34;q23) with CEP85L. The translocation fuses the 5'-end of CEP85L (isoform 4) to the 3'-end of PDGFRB.

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:
P09619

Gene ID:
5159

Database links:

[Entrez Gene: 5159](#) Human

[Entrez Gene: 18596](#) Mouse

[Entrez Gene: 24629](#) Rat

[Omim: 173410](#) Human

[SwissProt: P09619](#) Human

[SwissProt: P05622](#) Mouse

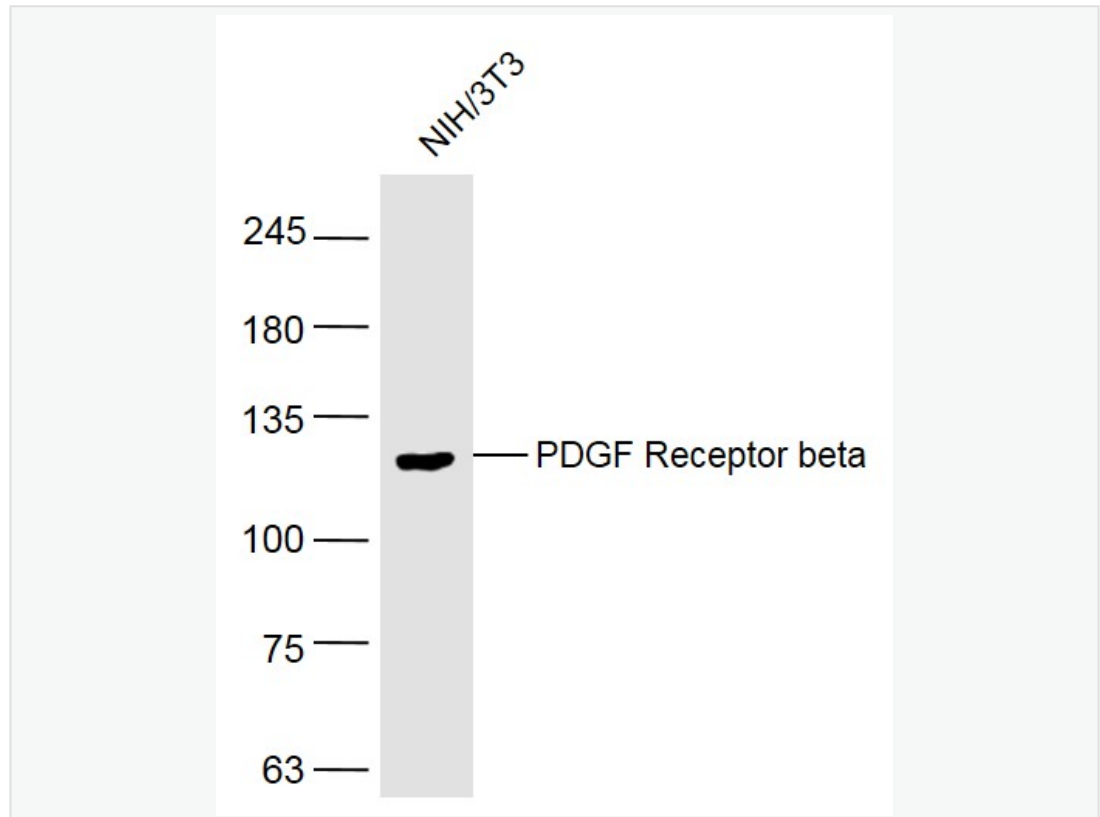
[SwissProt: Q05030](#) Rat

[Unigene: 509067](#) Human

[Unigene: 4146](#) Mouse

[Unigene: 98311](#) Rat

**Product
Picture**



Sample:

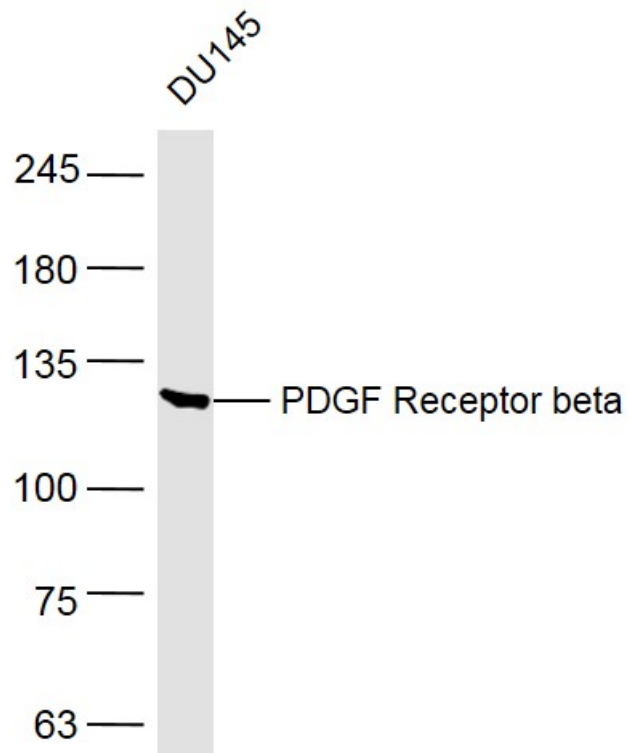
NIH/3T3(Rat) Cell Lysate at 30 ug

Primary: Anti-PDGF Receptor beta (SL0232R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 118 kD

Observed band size: 118 kD



Sample:

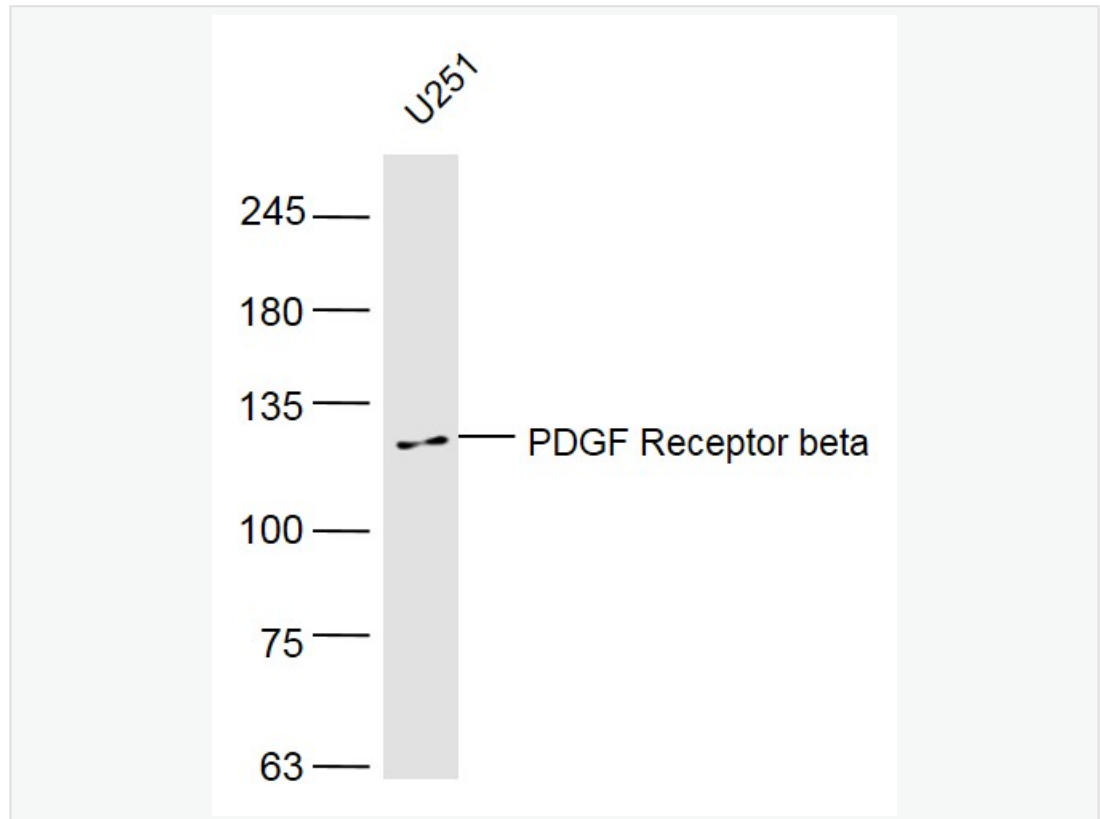
DU145(Human) Cell Lysate at 30 ug

Primary: Anti-PDGF Receptor beta (SL0232R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 118 kD

Observed band size: 118 kD



Sample:

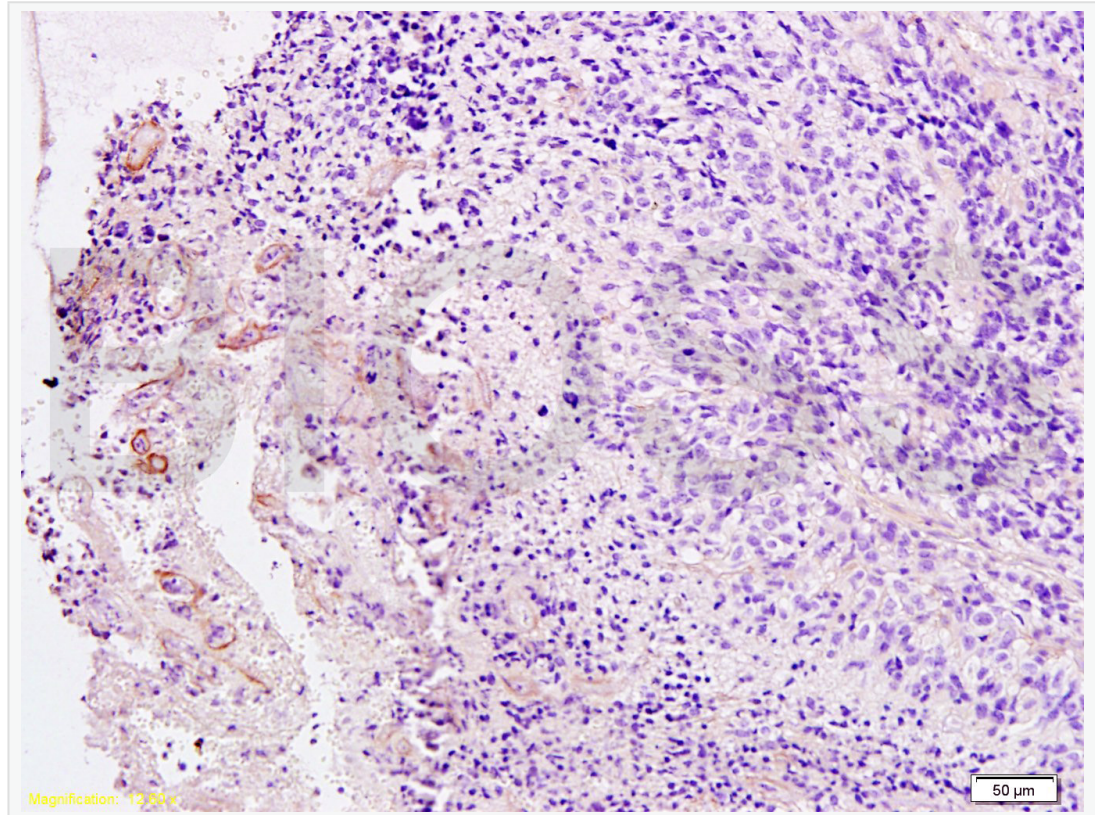
U251(Human) Cell Lysate at 30 ug

Primary: Anti-PDGF Receptor beta (SL0232R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 118 kD

Observed band size: 118 kD



Tissue/cell: Human brain glioma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-PDGFRB Polyclonal Antibody, Unconjugated(SL0232R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining