

Recombinant Human PDGFRA Protein, C-His-tagged

Cat. No. PDGFRA-111H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PDGFRA Protein with C-His tag was expressed in E. coli.
Species	Human
Source	E.coli
Description	Platelet derived growth factor (PDGF) family proteins exist as several disulphide-bonded, dimeric isoforms (PDGF AA, PDGF AB, PDGF BB, PDGF CC, and PDGF DD) that bind in a specific pattern to two closely related receptor tyrosine kinases, PDGF receptor α (PDGFRα) and PDGF receptor β (PDGFRβ). PDGFRα and PDGFRβ share 75% to 85% sequence homology between their two intracellular kinase domains, while the kinase insert and carboxy-terminal tail regions display a lower level (27% to 28%) of homology. PDGFRα homodimers bind all PDGF isoforms except those containing PDGF D. PDGFRβ homodimers bind PDGF BB and DD isoforms, as well as the PDGF AB heterodimer. The heteromeric PDGF receptor α/β binds PDGF B, C, and D homodimers, as well as the PDGF AB heterodimer. PDGFRα and PDGFRβ can each form heterodimers with EGFR, which is also activated by PDGF. Various cells differ in the total number of receptors present and in the receptor subunit composition, which may account for responsive differences among cell types to PDGF binding. Ligand binding induces receptor dimerization and autophosphorylation, followed by binding and activation of cytoplasmic SH2 domain-containing signal transduction molecules, such as GRB2, Src, GAP, PI3 kinase, PLCγ, and NCK. A number of different signaling pathways are initiated by activated PDGF receptors and lead to control of cell growth, actin reorganization, migration,

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and differentiation. Tyr751 in the kinase-insert region of PDGFR β is the docking site for PI3 kinase. Phosphorylated pentapeptides derived from Tyr751 of PDGFR β (pTyr751-Val-Pro-Met-Leu) inhibit the association of the carboxy-terminal SH2 domain of the p85 subunit of PI3 kinase with PDGFR. Tyr740 is also required for PDGFR β -mediated PI3 kinase activation.

Molecular Mass	~56 kDa
AA Sequence	QLSLPSILPNENEKVVQLNSSFSLRCFGESEVSWQYPMSEEESSDVEIRNEENNSGL FVTVLEVSSASAAHTGLYTCYYNHTQTEENELEGRHIYIYVPDPAFVPLGMTDYL VIVEDDDSAIIPCRITDPETPVTLNHSEGVVPASYDSRQGFNGTFTVGPYICEATVKG KKFQTIPFNVYALKATSELDLEMEALKTVYKSGETIVVTCAVFNNEVVDLQWTYPGE VKGKGITMLEEIKVPSIKLVYTLTVPEATVKDSGDYECARQATREVKEMKKVTISVH EKGFIKPTFSQLEAVNLHEVKHFVVEVRAYPPPRISWLKNNLTLIENLTEITTDVEKI QEIRYRSKLKIRAKEEDSGHYTIVAQNEDAVKSYTFELLTQVPSSILDLVDDHHGST GGQTVRCTAEGTPLPDIEWMICKDIKKCNNETSWTILANNVSNIIIEHSRDRSTVEG RVTFKVEETIAVRCLAKNLLGAENRELKLVAPTLRSELTVA
Purity	Transferred into competent cells and the supernatant was purified by NI column affinity chromatography and the purity is > 85% (by SDS-PAGE).
Notes	For research use only, not for use in diagnostic procedure.
Storage	Store at 4 centigrade short term. Aliquot and store at -20 centigrade long term. Avoid freeze-thaw cycles.
Concentration	≥ 0.5 mg/mL
Storage Buffer	PBS, 4M Urea, pH7.4

GENE INFORMATION

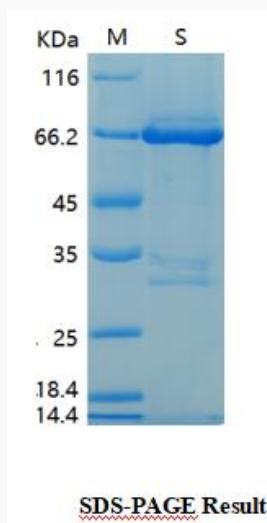
Gene Name	PDGFRA platelet-derived growth factor receptor, alpha polypeptide [Homo sapiens (human)]
Official Symbol	PDGFRA
Synonyms	PDGFRA; platelet-derived growth factor receptor, alpha polypeptide; platelet-derived growth factor receptor alpha; CD140a; PDGFR2; PDGFR-alpha; PDGF-R-alpha; CD140a antigen; PDGFRA/BCR fusion; CD140 antigen-like family member A; platelet-derived growth factor receptor 2; alpha-type platelet-derived growth factor receptor; rearranged-in-hypereosinophilia-platelet derived growth factor receptor alpha fusion protein; CD140A; PDGFR-2; RHEPDGFRA; MGC74795;
Gene ID	5156
mRNA Refseq	NM_006206
Protein Refseq	NP_006197
MIM	173490
UniProt ID	P16234

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SDS-PAGE



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