

Active Recombinant Human PDGFA

Cat. No. PDGFA-523H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Platelet-derived growth factor AA (rhPDGF-AA) Ser 87 – Thr211(Accession # P04085) was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	87-211 a.a.
Description	PDGFs are mitogenic during early developmental stages, driving the proliferation of undifferentiated mesenchyme and some progenitor populations. During later maturation stages, PDGF signalling has been implicated in tissue remodelling and cellular differentiation, and in inductive events involved in patterning and morphogenesis. In addition to driving mesenchymal proliferation, PDGFs have been shown to direct the migration, differentiation and function of a variety of specialised mesenchymal and migratory cell types, both during development and in the adult animal. Other growth factors in this family include vascular endothelial growth factors B and C (VEGF-B, VEGF-C) which are active in angiogenesis and endothelial cell growth, and placenta growth factor (PIGF) which is also active in angiogenesis. PDGF plays a role in embryonic development, cell proliferation, cell migration, and angiogenesis. PDGF is a required element in cellular division for fibroblast, a type of connective tissue cell. PDGF is also known to maintain proliferation of oligodendrocyte progenitor cells. Platelet-derived growth factor subunit A is also known as PDGFA, PDGF-A, PDGF1, is a member of the platelet-derived growth

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	factor family. PDGFA can exist either as a homodimer (PDGF-AA) or as a heterodimer with the platelet-derived growth factor Bata polypeptide (PDGF-AB), where the dimers are connected by disulfide bonds.
Form	Lyophilized from 0.22 µm filtered solution in 50mM Tris 150mM NaCl pH 7.0. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Bio-activity	The bio-activity was determined by dose-dependent stimulation of the proliferation of mouse 3T3 cells. The ED50 was 4-10 ng/ml.
Molecular Mass	rhPDGF-AA is a homodimeric, glycosylated, polypeptide chain containing 2×110 amino acids, and has a calculated MW of 29 kDa. In DTT-reduced SDS-PAGE, rhPDGF-AA protein migrates as 16.5 kDa poly peptide due to glycosylation.
Endotoxin	Less than 1.0 EU per µg of the rhPDGF-AA by the LAL method.
Purity	>95% purity as determined by SDS-PAGE of reduced rhPDGF-AA.
Storage	Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4 centigrade-8 centigrade); After reconstitution under sterile conditions for 1 month (4 centigrade-8 centigrade) or 3 months (-20 centigrade to -70 centigrade).

GENE INFORMATION

Gene Name	PDGFA platelet-derived growth factor alpha polypeptide [Homo sapiens]
Official Symbol	PDGFA
Synonyms	PDGFA; platelet-derived growth factor alpha polypeptide; platelet-derived growth factor subunit A; PDGF A chain; PDGF A; PDGF1; platelet derived growth factor

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	alpha chain; PDGF-1; PDGF A-chain; PDGF subunit A; platelet-derived growth factor A chain; platelet-derived growth factor alpha chain; platelet-derived growth factor alpha isoform 2 preproprotein; PDGF-A;
Gene ID	5154
mRNA Refseq	NM_002607
Protein Refseq	NP_002598
MIM	173430
UniProt ID	P04085
Chromosome Location	7p22
Pathway	Ceramide signaling pathway, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Cytokines and Inflammatory Response, organism-specific biosystem; Downstream signal transduction, organism-specific biosystem; Focal Adhesion, organism-specific biosystem; Focal adhesion, organism-specific biosystem;
Function	cell surface binding; collagen binding; eukaryotic cell surface binding; growth factor activity; platelet-derived growth factor binding; platelet-derived growth factor receptor binding; contributes_to platelet-derived growth factor receptor binding; plate