

## Recombinant Human PDGFAA

**Cat. No.** PDGFA-56H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human PDGF-AA produced in <i>Yeast</i> is a homodimeric, glycosylated, polypeptide chain containing 2 x 110 amino acids and having a total molecular mass of 34 kDa. PDGF-AA is purified by proprietary chromatographic techniques.
<b>Species</b>	Human
<b>Source</b>	Yeast
<b>Description</b>	PDGF-AA, PDGF-BB and PDGF-AB, are potent mitogens for a variety of cell types including smooth muscle cells, connective tissue cells, bone and cartilage cells, and some blood cells. The PDGF is stored in platelet alpha-granules and released upon platelet activation. The PDGF is involved in a number of biological processes, including hyperplasia, chemotaxis, embryonic neuron development, and respiratory tubule epithelial cell development. Two distinct signaling receptors used by PDGF have been identified and named PDGFR-alpha and PDGFR-beta. PDGFR-alpha is high-affinity receptor for each of the three PDGF forms. On the other hand, PDGFR-beta interacts with only PDGF-BB and PDGF-AB.
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	Greater than 98.0% as determined by SDS-PAGE.
<b>Formulation</b>	The protein was lyophilized with 20mM sodium phosphate buffer.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized PDGF-AA in sterile 18MΩ-cm H <sub>2</sub> O

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not less than 100g/ml, which can then be further diluted to other aqueous solutions.

**Biological Activity**

The ED<sub>50</sub> was found to be 1ng/ml calculated by the ability to stimulate the proliferation of mouse 3T3 fibroblasts. (PNAS 94, 10205, 1997. Biochemistry, 1996, 35, 12077).

**Protein Content**

Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.48 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of PDGF-BB as a Reference Standard.

**Storage**

Lyophilized PDGF-AA although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution PDGF-AA should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

**Gene Name**

[PDGFA platelet-derived growth factor alpha polypeptide \[ Homo sapiens \]](#)

**Synonyms**

PDGFA; platelet-derived growth factor alpha polypeptide, 2 x 110 amino acids; PDGF1; PDGF-A; Platelet-derived growth factor subunit A; PDGF subunit A; Platelet-derived growth factor A chain; PDGF A-chain; PDGF subunit A; platelet-derived growth factor alpha; platelet-derived growth factor alpha chain; platelet-derived growth factor alpha isoform; preproprotein

**Gene ID**

[5154](#)

**mRNA Refseq**

[NM\\_002607](#)

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<b>Protein Refseq</b>	<a href="#">NP_002598</a>
<b>UniProt ID</b>	P04085
<b>Chromosome Location</b>	7p22
<b>MIM</b>	<a href="#">173430</a>
<b>Pathway</b>	Cytokine-cytokine receptor interaction; Focal adhesion; Gap junction; Glioma; MAPK signaling pathway; Prostate cancer; Regulation of actin cytoskeleton; Hemostasis; Signaling by PDGF
<b>Function</b>	cell surface binding; collagen binding; growth factor activity; platelet-derived growth factor binding; platelet-derived growth factor receptor binding; contributes_to platelet-derived growth factor receptor binding; protein heterodimerization activity

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