

Recombinant Human PDGFAA

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

SPECIFICATION

Product Overview	Recombinant Human PDGF-AA produced in Yeast 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.
Species	Human
Source	Yeast
Description	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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by SDS-PAGE.
Formulation	The protein was lyophilized with 20mM sodium phosphate buffer.
Solubility	It is recommended to reconstitute the lyophilized PDGF-AA in sterile 18MΩ-cm H ₂ O

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	not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The ED ₅₀ 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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Protein Refseq	NP_002598
UniProt ID	P04085
Chromosome Location	7p22
MIM	173430
Pathway	Cytokine-cytokine receptor interaction; Focal adhesion; Gap junction; Glioma; MAPK signaling pathway; Prostate cancer; Regulation of actin cytoskeleton; Hemostasis; Signaling by PDGF
Function	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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