

# Recombinant Human Platelet-derived Growth Factor AA (rh PDGF-AA)

**Synonyms:** Glioma-derived growth factor (GDGF), Osteosarcoma-derived Growth Factor (ODGF), PDGF-1.

**Introduction:** PDGFs are disulfide-linked dimers consisting of two 12.0-13.5 kDa polypeptide chains, designated PDGF-A and PDGF-B chains. The three naturally occurring PDGFs; 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 PDGFs are stored in platelet alpha-granules and are released upon platelet activation. The PDGFs are 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 PDGFs 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.

**Description:** Recombinant human PDGF-AA is a non-glycosylated, disulfide-linked homodimer of two A-chains (2 x 125 amino acids) having a molecular mass of 28.5 kDa.

**Source:** *Escherichia Coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a 0.22 µm filtered solution in 100mM acetic acid. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rh PDGF-AA in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh PDGF-AA although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh 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.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Amino acid sequences:** SIEEAVPAVC KTRTVIYEIP RSQVDPTSAN FLIWPPCVEV KRCTGCCNTS  
SVKQCPSRVH HRSVKVAKVE YVRKKPKLKE VQVRLEEHL E CACATTSLNP DYREEDTGRP  
RESGKKRKRK RLLKPT

**Endotoxicity:** The endotoxin level is less than 1 EU / µg determined by LAL method.

**Biological Activity:** Determined by the dose-dependent stimulation of thymidine uptake by BALB/c 3T3 cells the ED50 is < 1 ng/ml, corresponding to a specific activity of > 1 x 10<sup>6</sup> units/mg.

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<i>small</i>	2 µg	Cat.N°	11343682
<i>medium</i>	10 µg	Cat.N°	11343683
<i>large</i>	50 µg	Cat.N°	11343685
<i>x-large</i>	250 µg	Cat.N°	11343687
<i>xx-large</i>	1000 µg	Cat.N°	11343688

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