

# Recombinant Mouse Platelet Derived Growth Factor AA

**Cat. No.** Pdgfa-298M    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Product Overview</b> | Recombinant Mouse Platelet Derived Growth Factor-AA is a disulfide linked dimer comprised of 2 polypeptide chains of 126 amino acids each, with a dimeric molecular weight of 28.9 kDa. Recombinant Mouse PDGF-AA produced in <i>E. Coli</i> is a non-glycosylated homodimer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Description</b>      | Platelet-derived growth factor subunit A is a protein that in humans is encoded by the PDGFA gene. The protein encoded by this gene is a member of the platelet-derived growth factor family. The four members of this family are mitogenic factors for cells of mesenchymal origin and are characterized by a motif of eight cysteines. This gene product can exist either as a homodimer or as a heterodimer with the platelet-derived growth factor beta polypeptide, where the dimers are connected by disulfide bonds. Studies using knockout mice have shown cellular defects in oligodendrocytes, alveolar smooth muscle cells, and Leydig cells in the testis; knockout mice die either as embryos or shortly after birth. Two splice variants have been identified for this gene. |
| <b>AA Sequence</b>      | MSIEEAVPAV CKTRTVIYEI PRSQVDPTSA NFLIWPPCVE VKRCTGCCNT<br>SSVKCQPSRV HHRSVKVAKV EYVRKKPKLK EVQVRLEEHL ECACATSNLN<br>PDHREEETGR RRESGKNRKR KRLKPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Formulation</b>         | Lyophilized with no additives.                                                                                                                                                                   |
| <b>Physical Appearance</b> | Sterile Filtered white lyophilized (freeze-dried) powder.                                                                                                                                        |
| <b>Purity</b>              | Greater than 97% as determined by: (1) Reducing and non-reducing SDS-PAGE. (2) Analytical HPLC.                                                                                                  |
| <b>Biological Activity</b> | Determined by the dose-dependent stimulation of the proliferation of Balb/c 3T3 cells. The expected ED50 for this effect is 8-10 ng/ml.                                                          |
| <b>Protein Content</b>     | Determined by: (1) UV spectroscopy at 280 nm. (2) Quantitation on SDS-PAGE against a known standard.                                                                                             |
| <b>Reconstitution</b>      | It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 -0.5 mg/ml, which can be further diluted into other aqueous solutions.                    |
| <b>Stability</b>           | Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage. |

## GENE INFORMATION

|                    |                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>   | <a href="#">Pdgfa platelet derived growth factor, alpha [ Mus musculus ]</a>                             |
| <b>Synonyms</b>    | Pdgfa; platelet derived growth factor, alpha; OTTMUSP00000030442; OTTMUSP00000030454; OTTMUSP00000030455 |
| <b>Gene ID</b>     | <a href="#">18590</a>                                                                                    |
| <b>mRNA Refseq</b> | <a href="#">NM_008808</a>                                                                                |

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| <b>Protein Refseq</b>      | NP_032834                                                                                                                                                                                                   |
| <b>UniProt ID</b>          | P20033                                                                                                                                                                                                      |
| <b>Chromosome Location</b> | 2 73.0 cM                                                                                                                                                                                                   |
| <b>Pathway</b>             | Cytokine-cytokine receptor interaction; Focal adhesion; Gap junction; Glioma; MAPK signaling pathway; Melanoma; Pathways in cancer; Prostate cancer; Regulation of actin cytoskeleton; Renal cell carcinoma |
| <b>Function</b>            | collagen binding; growth factor activity                                                                                                                                                                    |

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