

## Recombinant Human PDGFBB

**Cat. No.** PDGFB-59H    **Lot. No.** (See product label)

### SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b>    | Recombinant Human Platelet-Derived Growth Factor BB is a homodimeric, glycosylated, polypeptide chain containing 109 amino acids and having a molecular mass of 32,021 Dalton. PDGF-BB is purified by proprietary chromatographic techniques.                                                                                                                                                                                                                               |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>              | S.Cerevisiae                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>         | PDGF-BB 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 (PDGF-BB) or as a heterodimer with the platelet-derived growth factor alpha polypeptide (PDGF-AB), where the dimers are connected by disulfide bonds. Mutations in this gene are associated with meningioma. |
| <b>Amino acid sequence</b> | The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Leu-Gly-Ser-Leu.                                                                                                                                                                                                                                                                                                                                                               |
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purity</b>              | Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Formulation</b>         | The protein was lyophilized from 0.2 µ filtered solution in 20mM sodium acetate in                                                                                                                                                                                                                                                                                                                                                                                          |

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|                            | absence of any carrier protein.                                                                                                                                                                                                                                                                                                                                                              |
| <b>Solubility</b>          | It is recommended to reconstitute the lyophilized Platelet-derived Growth Factor-BB in sterile 18MΩ-cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous solutions.                                                                                                                                                                                 |
| <b>Biological Activity</b> | The ED <sub>50</sub> , calculated by the dose-dependant proliferation of BALB/c 3T3 indicator cells (measured by 3H-thymidine uptake) is < 1 ng/ml, corresponding to a Specific Activity of 1 MIU/mg.                                                                                                                                                                                        |
| <b>Protein content</b>     | Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.55 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. |
| <b>Storage</b>             | Lyophilized Platelet-derived Growth Factor BB although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution PDGF BB should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.                                                                                                              |

## GENE INFORMATION

|                  |                                                                                                                                                                                                                                                                                                                                         |
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| <b>Gene Name</b> | PDGFB platelet-derived growth factor beta polypeptide (simian sarcoma viral (v-sis) oncogene homolog) [ Homo sapiens ]                                                                                                                                                                                                                  |
| <b>Synonyms</b>  | PDGFB; platelet-derived growth factor beta polypeptide (simian sarcoma viral (v-sis) oncogene homolog); SIS; SSV; PDGF2; c-sis; FLJ12858; PDGFB; PDGF subunit B; Platelet-derived growth factor B chain; Platelet-derived growth factor beta; PDGF-2; Platelet-derived growth factor, beta polypeptide (oncogene SIS); platelet-derived |

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| growth factor 2            |                                                                                                                                                                                                                                                              |
| <b>Gene ID</b>             | 5155                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>         | NM_002608                                                                                                                                                                                                                                                    |
| <b>Protein Refseq</b>      | NP_002599                                                                                                                                                                                                                                                    |
| <b>UniProt ID</b>          | P01127                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 22q12.3-q13.1; 22q13.1                                                                                                                                                                                                                                       |
| <b>MIM</b>                 | 190040                                                                                                                                                                                                                                                       |
| <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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