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Certificate of Analysis and Data Sheet

Recombinant Human Platelet Derived Growth Factor-BB, Yeast

Catalog No.
228-11216

Source:
Saccharomyces cerevisiae

Synonyms:

Glioma-derived growth factor, GDGF, Osteosarcoma-derived Growth Factor, ODGF, SIS, SSV, PDGF2, c-sis, FLJ12858, PDGF-BB, PDGF B-chain, Platelet-derived growth factor beta polypeptide, Becaplermin.

Introduction:

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. Reciprocal translocations between chromosomes 22 and 7, at sites where this gene and that for COL1A1 are located, are associated with a particular type of skin tumor called dermatofibrosarcoma protuberans resulting from unregulated expression of growth factor. Two splice variants have been identified for this gene.

Description:

Platelet-Derived Growth Factor BB Human Recombinant 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.

Source:

Saccharomyces cerevisiae

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

The protein was lyophilized from 0.2 μ m filtered solution in 20mM sodium acetate in absence of any carrier protein.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Solubility:

It is recommended to reconstitute the lyophilized Platelet-derived Growth Factor-BB in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Stability:

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.

Purity:

Greater than 97.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino acid sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Leu-Gly-Ser-Leu.

Biological Activity:

The ED₅₀, 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.

Protein content:

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.

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