Technical Data Sheet

Recombinant human PDGF-BB protein

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Lot Specific Information

Lot Number: **Lot Specific***

Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Information

Catalog Number:	**RP061**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Neural stem cell proliferation and neuronal differentiation Expansion of induced pluripotent, embryonic and mesenchymal stem cells Osteogenic differentiation
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	25 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human PDGF-BB protein (platelet-derived growth factor BB) is a homodimeric member of the PDGF family, whose A, B, C and D polypeptide chains assemble into homodimers such as PDGF-AA and PDGF-BB or heterodimers such as PDGF-AB. PDGF-BB binds both PDGFR-α and PDGFR-β, activating downstream PI3K, MAPK and STAT3 signaling, and is produced by platelets, where it is stored in α-granules and released on activation, as well as by endothelial cells, fibroblasts, vascular smooth muscle cells, osteoblasts, glia and neurons. PDGF plays important roles in embryonic development, cell proliferation, migration and angiogenesis, and is a potent mitogen for mesenchymal cells such as fibroblasts, glial cells and vascular smooth muscle cells. Clinically, PDGF-BB is used in the treatment of periodontal and orthopedic bone defects and dermal wound healing. In cell culture, PDGF-BB promotes stem cell proliferation, stem cell marker expression and migration of mesenchymal stem cells (MSCs), increases viability of bone marrow-derived stem cell spheroids, acts as a neurotrophic factor for neuronal progenitors and drives trans-differentiation of urine-derived stem cells into neuronal cells, making it a key reagent for stem cell and regenerative medicine research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. A GMP-grade version of this protein is available for cell and gene therapy manufacturing. Contact us at customerservice@bioxcell.com for details. Species reactivity: human. Species similarity: mouse - 89%, rat - 88%, bovine - 95%, porcine - 91%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at

https://bioxcell.com/faqs.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

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