Technical Data Sheet

Recombinant bovine PDGF-BB protein

bioxcell.com

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

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:	**RP081**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Culture of bovine (cow) muscle stem cells Cellular agriculture and cultivated meat cell culture media optimization Serum-free media development Proliferation of fibroblasts and smooth muscle cells
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:	24.5 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant bovine PDGF-BB protein (platelet-derived growth factor BB) is a 24.5 kDa homodimer of two disulfide-linked PDGF-B chains and a member of the PDGF family of A, B, C and D chains, with a conserved cystine knot motif crucial for its stability and function. PDGF-BB binds the tyrosine kinase receptors PDGFR-α and PDGFR-β, inducing receptor dimerization and autophosphorylation and activating the PI3K/Akt, MAPK and PLCγ pathways that regulate proliferation, migration, survival and differentiation. In wound healing and development, PDGF-BB stimulates proliferation and migration of fibroblasts and smooth muscle cells, promotes granulation tissue formation and extracellular matrix remodeling, and enhances angiogenesis by recruiting pericytes and smooth muscle cells to stabilize new blood vessels. In cultivated meat manufacturing, PDGF-BB promotes rapid cell expansion in bioreactors, aids differentiation of myoblasts into mature muscle cells, improves cell migration and integration within scaffolds, and stimulates extracellular matrix production, while reducing reliance on fetal bovine serum (FBS), making it a key growth factor for cost-effective, serum-free cultivated meat production. 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. Species reactivity: bovine.

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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