Technical Data Sheet

Recombinant porcine TGF-β3 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:	**RP085**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Induced pluripotent and embryonic stem cell differentiation and maintenance iPSC-derived mesoderm differentiation Culture of porcine (pig) muscle stem cells Induction of cell migration, proliferation and extracellular matrix production Cellular agriculture and cultivated meat cell culture media optimization Inclusion in cultivated meat media
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution Buffer A) 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 (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant porcine TGF-β3 protein (transforming growth factor beta 3) is a member of the TGF-β family and wider TGF-β superfamily that, like TGF-β1 and TGF-β2, signals through receptor complexes of type I and type II serine/threonine kinase receptors to activate intracellular SMAD transcription factors. The TGF-β family shows a high degree of overlap and redundancy in regulating cell survival, proliferation and differentiation, while TGF-β3 has isoform-specific roles in embryonic palate fusion and wound healing. In culture, TGF-β3 is often used for porcine pluripotent cell maintenance and is a component of B8 medium, the low-cost, weekend-free iPSC medium developed in the lab of Paul Burridge at Northwestern University, where TGF-β3 was shown to maintain iPSCs at as little as 0.1 ng/ml compared with 2 ng/ml for TGF-β1, making it a cost-effective alternative to TGF-β1 and a promising reagent for cultivated porcine protocols and serum-free media development in cellular agriculture. 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: porcine.

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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