Technical Data Sheet

Recombinant mouse 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:	**RP044**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Expansion and differentiation of mouse pluripotent stem cells Propagation of mouse embryonic stem cells iPSC-derived mesoderm differentiation
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:	12.7 kDa (monomer) 25.4 kDa (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant mouse 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 isoforms show 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 cell culture, TGF-β3 is widely used for pluripotent stem 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 Kuo et al. showed that TGF-β3 maintains iPSCs at concentrations as low as 0.1 ng/ml compared with 2 ng/ml for TGF-β1. With 100% homology to human TGF-β3, recombinant mouse TGF-β3 offers a potent, cost-effective alternative to TGF-β1, making it a valuable reagent for pluripotent stem cell culture. 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: mouse. Species similarity: human - 100%, rat - 99%, bovine - 99%, porcine - 98%.

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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