Technical Data Sheet

Recombinant mouse/rat activin A 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:	**RP040**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Large scale stem cell expansion Expansion and differentiation of mouse pluripotent stem cells
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:	24 kDa (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant mouse/rat activin A protein is an engineered, optimized form of activin A, a member of the TGF-β superfamily, that incorporates an N-terminal truncation removing a disulfide-linked extension, enabling extremely consistent high-yield manufacture with no observed change in bioactivity and making it ideal for large-scale stem cell culture processes. Activins are disulfide-linked dimers of inhibin β chains, with activin A a homodimer of inhibin βA synthesized as a larger precursor with a cleaved pro-domain, and its activity is regulated by the high-affinity inhibitor follistatin and by inhibins. In vivo, activin A regulates embryogenesis, reproductive system development, wound healing and immune responses. In culture, activin A is used with FGF-2 to maintain pluripotency of induced pluripotent and embryonic stem cells, directs differentiation into definitive endoderm as a precursor to pancreatic and liver cells, promotes neural precursors and astrocytic differentiation with CNTF and GDNF, supports mesodermal differentiation toward muscle, bone and blood cells, and is often used for organoid development and maintenance. Mouse activin A shares 100% homology with rat, human, porcine and bovine proteins, making it a versatile reagent for stem cell and organoid 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. Species reactivity: mouse, rat. Species similarity: human - 100%, bovine - 100%, porcine - 100%.

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

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © Bio X Cell, LLC