Technical Data Sheet

Recombinant human/mouse activin B 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:	**RP049**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Drug discovery in metabolism Metabolic disease research Wound healing and tissue repair Mesenchymal stem cell research
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:	25.6 kDa (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human/mouse activin B protein is a secreted member of the transforming growth factor-beta (TGF-β) family, formed as a disulfide-linked homodimer of two inhibinβB chains, which share 63% identity with inhibinβA and 50% with inhibinβC and can also combine into heterodimers such as activin AB. The activin class includes activins A, B, C and E and extends to GDF-8 (myostatin) and GDF-11 (BMP-11), and activins signal through the type 1 activin receptor-like kinases ALK4 and ALK7 to activate the SMAD2/3 pathway, regulating growth, differentiation and proliferation in a wide range of cell types. Together with activin A, activin B mediates the activation or expression of JNK, iNOS and PARP1 and the activation of hepatic stellate cells (HSCs), driving the initiation and progression of liver fibrosis, while activin overexpression has shown beneficial effects in diabetes by stimulating insulin sensitivity, reducing fat through FGF-21 induction and suppressing hepatic glucagon action via PDE4B. In adipose-derived stem cells (ADSCs), activin B activates JNK and ERK signaling to induce actin stress fiber formation and cell migration that promotes wound healing, making it a valuable reagent for fibrosis, metabolic and regenerative 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 - 97%, rat - 97%, bovine - 100%, porcine - 99%.

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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