# Technical Data Sheet

## Recombinant human/mouse activin E (Avi-tag) 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

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|---|---|
| **Catalog Number:** | **RP084** |
| **Protein Identity:** | Confirmed identity with expected mass, determined by mass spectrometry |
| **Reported Applications:** | Drug discovery in endocrinology<br>Drug discovery in metabolism<br>Drug discovery in inflammation |
| **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:** | 27.2 kDa (dimer) |
| **Bioactivity Assay:** | No significant difference between EC50 of reference and test lots |
| **Mycoplasma:** | Negative |

## Description

Recombinant human/mouse activin E (Avi-tag) protein is a member of the TGF-β superfamily, a dimeric protein of two disulfide-linked subunits processed from precursor molecules and bearing the characteristic cystine knot motif crucial for its function. Activin E signals through the ALK7 receptor together with ActRIIA and ActRIIB in liver and adipose tissue, activating the SMAD2/3 pathway while resisting antagonists such as follistatin. Primarily expressed in the liver and also detected in adipose tissue and the gastrointestinal tract, activin E regulates glucose and lipid metabolism and, like other activins, enhances FSH binding in the ovarian follicle, promotes spermatogenesis and participates in androgen synthesis. Its links to adipose regulation, insulin sensitivity and thermogenesis position activin E as a potential target in obesity, diabetes and other metabolic disorders, and a protein of interest for drug discovery in endocrinology, metabolism and inflammation. The 15-amino-acid Avi-tag (GLNDIFEAQKIEWHE) enables efficient site-specific biotinylation with the E. coli biotin ligase BirA for easy detection, immobilization and purification, making this protein a versatile reagent for metabolic and assay development 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: human. Species similarity: mouse - 98%, rat - 98%, bovine - 95%, porcine - 94%.

## 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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