Technical Data Sheet

Recombinant porcine EGF 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:	**RP073**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Cellular agriculture process development Inclusion in cultivated meat media Culture of porcine (pig) muscle stem cells Culture of porcine (pig) organoids Differentiation of iPSCs into epithelial 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:	6.3 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant porcine EGF protein (epidermal growth factor) is a 6.3 kDa, 53-amino-acid globular growth factor of the EGF family, which includes TGF-alpha, amphiregulin, betacellulin, epiregulin, HB-EGF, epigen and the neuregulins, stabilized by three intramolecular disulfide bonds and released from type I transmembrane precursors by proteolytic cleavage. EGF binds high-affinity receptor tyrosine kinases of the EGFR/ErbB family (EGFR, ErbB2, ErbB3, ErbB4), triggering receptor dimerization and PI3K, ERK1/2, JAK/STAT, β-catenin and calcium signaling to stimulate proliferation, differentiation and survival of epidermal and epithelial cells, and it contributes to angiogenesis, epithelial development, wound healing and cancer progression. In culture, recombinant EGF supports expansion and differentiation of epithelial, neural, mesoderm and hematopoietic lineages from iPSCs and ESCs and is a key organoid media component with R-spondin 1, Noggin or Gremlin, Wnt3a and FGF10 for intestine, stomach, liver, pancreas, brain and cancer organoids. Porcine EGF is also crucial for cultivated meat, maintaining and stabilizing pig muscle stem cells long term with preserved myogenic marker expression, making it a key reagent for organoid, stem cell and cellular agriculture 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: 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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