Technical Data Sheet

Recombinant porcine HGF NK1 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:	**RP071**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Differentiation of iPSCs to hepatocyte-like cells iPSC and primary cell differentiation to muscle Cellular agriculture and cultivated meat cell culture media optimization Cellular agriculture process development
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:	20 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant porcine HGF NK1 protein (hepatocyte growth factor NK1) is the smallest naturally occurring splice variant of HGF, comprising the N-terminus and first kringle domain, from a growth factor that regulates cell growth, motility and morphogenesis and plays a central role in angiogenesis, tumorigenesis and tissue regeneration. Full-length HGF is secreted as a single inactive polypeptide that is cleaved by serine proteases into a 62 kDa heavy chain and a 32–36 kDa light chain, linked by a disulfide bond to form the active heterodimer, and it binds and activates the receptor tyrosine kinase c-Met to trigger PI3K/AKT, FAK, JNK and ERK1/2 signaling. Although porcine HGF is similar in sequence to human and bovine HGF, it differs in structure and bioactivity, showing greater resistance to protease digestion and higher potency in inducing muscle cell proliferation and differentiation. These properties give porcine HGF important implications for cellular agriculture, offering a faster route toward tissues with improved regenerative qualities, and this protein is produced in an animal-free microbial system compatible with production at scale, making it a valuable growth factor for cultivated meat media development. 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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