Technical Data Sheet

Recombinant human 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:	**RP039**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Differentiation of iPSCs to hepatocyte-like cells Chemically defined media for organoid culture Airway, mammary, liver hepatocyte, and urothelium organoids
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.7 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 human HGF NK1 protein (hepatocyte growth factor, also called scatter factor) is the smallest naturally occurring splice variant of HGF, comprising the N-terminal hairpin loop domain involved in c-Met binding and the first kringle domain. 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, joined by a disulfide bond to form the active αβ heterodimer, and it signals through the receptor tyrosine kinase c-Met to activate PI3K/AKT, FAK, JNK and ERK1/2 signaling. HGF is a multifunctional mitogen for mesenchymal, endothelial and epithelial cells that stimulates liver, kidney and lung development and, in adults, regulates cell motility, survival, angiogenesis and tissue regeneration, particularly liver regeneration, while dysregulated HGF/c-Met signaling contributes to tumor growth, invasion and metastasis. In cell culture, HGF supports the growth and maintenance of hepatocytes and endothelial cells, promotes osteogenic, chondrogenic and adipogenic differentiation of mesenchymal cells, and is used to study cell cycle, motility, invasion and wound healing, making HGF NK1 a valuable reagent for regenerative medicine and cancer 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 - 89%, rat - 90%, bovine - 93%, porcine - 95%.

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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