Technical Data Sheet

Recombinant human OSM 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:	**RP064**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Maturation of hepatoblasts into hepatocyte like cells
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water 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:	22 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human OSM protein (oncostatin M) is a 30 kDa secreted cytokine of the interleukin-6 family, which includes IL-11, CNTF and cardiotrophin-1, produced as a 252-amino-acid pre-pro-protein whose signal peptide and C-terminal domain are cleaved to yield the mature 195-amino-acid form. Unlike other family members, OSM binds the common gp130 subunit with low affinity and recruits either LIFRα or OSMRβ to form the type I or type II OSM receptor. OSM has essential functions in inflammation, neuroprotection, hematopoiesis, metabolism, early development, tumorigenesis and epithelial cell growth, and human OSM, which shares 45% sequence homology with mouse and rat OSM, 54% with bovine and 62% with porcine, has shown activity on mouse cells. In stem cell applications, animal-free OSM is used in iPSC and ESC protocols to promote maturation of hepatoblasts into hepatocyte-like cells for liver regenerative medicine research and drug and toxicology assay development, and it may maintain naïve mouse embryonic stem cells in the absence of LIF, while further uses include hematopoietic stem cell differentiation and cultured meat, making it a versatile reagent for stem cell and regenerative medicine 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 - 50%, rat - 50%, bovine - 60%, porcine - 68%. NB: although the sequence identity is low, human OSM has been shown to be active on mouse ES cells.

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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