Technical Data Sheet

Recombinant mouse noggin 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:	**RP054**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Tumor organoid culture Maintenance of undifferentiated embryonic stem cells Epithelial organoid culture Stem cell differentiation into neural and microglial lineages
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:	46 kDa (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant mouse noggin protein is an extracellular antagonist of the bone morphogenetic proteins (BMPs) of the TGF-β family, binding and inhibiting BMP-2, -4, -5, -7, -13 and -14 with varying affinities and thereby preventing their interaction with receptors and blocking activation of downstream signaling cascades. Through its control of BMP signaling, noggin plays a crucial role in embryonic patterning as well as in the development of the neural tube, teeth, hair follicles and the eye. In cell culture, recombinant noggin is used for the maintenance of pluripotent stem cells and the differentiation of induced pluripotent stem cells (iPSCs) toward neural lineages, and it is an essential BMP inhibitor in a large variety of organoid culture systems, including intestinal, liver and lung organoids, making it a key reagent for stem cell, neural differentiation and organoid 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: mouse, rat.

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

Conditions: For research use only. Not for use in diagnostic or therapeutic

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