Technical Data Sheet

Recombinant mouse/rat FGF-8a 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:	**RP045**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Differentiation of midbrain dopaminergic neurons Differentiation of iPSC derived neural progenitors to neurons
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:	21.3 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant mouse/rat FGF-8a protein (fibroblast growth factor 8a) is a heparin-binding, monomeric isoform of FGF-8 with a molecular weight of 21.3 kDa and 182 residues spanning the signal sequence, N-terminal domain, FGF domain and proline-rich C-terminus, folded into two antiparallel β-sheets and several α-helices. Its conserved heparin-binding domain binds cell-surface heparan sulfate proteoglycans to localize FGF-8a to target cells, and it signals through FGF receptors to activate the Ras/MAPK pathway, with human and mouse FGF-8a sharing 100% homology. Originally discovered as a growth factor for androgen-dependent mouse mammary carcinoma cells, FGF-8a is widely expressed during embryogenesis, drives epithelial-mesenchymal transitions, organizes gastrulation and patterns the brain, eye, ear, limb and heart, and is required for morphogenesis and neurogenesis, expanding the midbrain in transgenic mice. In cell culture, FGF-8a is used to generate ESC- and iPSC-derived ventral midbrain dopaminergic neurons and supports neuronal induction and neurite outgrowth from spiral ganglion neurons, making it a key reagent for neural development and stem cell differentiation 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. Species similarity: human - 100%, bovine - 100%, porcine - 100%.

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

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

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