Technical Data Sheet

Recombinant human NT-3 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 Website Link: https://bioxcell.com/recombinant-human-nt-3-protein-rp017

Product Information

Catalog Number:	**RP017**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Recommended Dilution Buffer:	InVivoPure Reconstitution Buffer A
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution solution 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:	27.3 kDa (dimer) 13.7 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human NT-3 protein (neurotrophin 3) is a member of the neurotrophin family, alongside NGF, BDNF and NT-4/5, and is a non-covalently linked 27.3 kDa homodimer of two 13.6 kDa, 119-amino-acid mature monomers stabilized by a cysteine-knot fold. The mature human NT-3 sequence is identical to that of mouse, rat and pig. NT-3 is essential for development and maintenance of the nervous system, promoting the growth, survival and differentiation of peripheral, sensory and spinal motor neurons and oligodendrocytes, and contributing to heart development and myocardial vasculature. It signals primarily through the TrkC receptor, with additional interactions at p75NTR, TrkA and TrkB. In cell culture, NT-3 is used to differentiate iPSCs into cortical GABAergic and glutamatergic neurons (with BDNF, GDNF and IGF-1), to mature cortical organoids, to differentiate oligodendrocytes (with PDGF-AA and IGF-1) and to maintain endothelial and myocardial cells. NT-3 and related neurotrophins are studied as therapeutic candidates for neurodegenerative disease, spinal cord and peripheral nerve injury, and mood disorders, making it a valuable reagent for neuroscience 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. Mature human NT-3 is identical in sequence to mouse, rat and pig. Species similarity: mouse - 100%, rat - 100%, bovine - 98%, 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

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