

Technical Data Sheet

Recombinant human BDNF protein



bioxcell.com

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

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-bdnf-protein-rp014>

Product Information

Catalog Number:	RP014
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
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:	14 kDa
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human BDNF protein (brain-derived neurotrophic factor) is a ~13 kDa member of the neurotrophin family, alongside NGF and NT-3/4/5, and exists as a cysteine-knot-stabilized 119-amino-acid dimer. BDNF supports the survival, growth, maintenance and differentiation of neural stem cells and mature neurons, stimulates neurogenesis and dendrite/axon growth, drives synaptic plasticity, and promotes neural repair, signaling with high affinity through the TrkB receptor to activate MAPK, PI3K and PLC-γ cascades and with lower affinity through p75NTR to activate NF-κB. In cell culture, recombinant BDNF supports neuronal survival and synapse formation and is used with other factors to differentiate iPSC-derived neural progenitors into dopaminergic neurons (with GDNF, FGF-8a/FGF-8b and Shh), glutamatergic and GABAergic neurons (with GDNF, NT-3 or IGF-1) and cholinergic neurons (with IGF-1 and NGF), as well as to mature cortical organoids. Impaired BDNF signaling is linked to Alzheimer's and Parkinson's disease, depression, anxiety and spinal cord injury, making BDNF an important reagent for neuroscience and neurodegeneration 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: human. Species similarity: mouse - 99%, rat - 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

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

<https://bioxcell.com>
+1-866-787-3444
customerservice@bioxcell.com

Not for resale.

**Bio X Cell, Bio X Cell logo, and all other trademarks are the property
of Bio X Cell, LLC © Bio X Cell, LLC**