



Recombinant Human Brain-Derived Neurotrophic Factor (rhBDNF)

Catalog #107-13

Product Description

Brain-derived neurotrophic factor (BDNF) is a key member of the neurotrophin family, which also includes NGF, NT-3, and NT-4/5, and plays an essential role in neuronal survival, differentiation, and functional maintenance in both the central and peripheral nervous systems. Human BDNF is produced as a precursor protein and subsequently processed into its biologically active mature form. The mature protein functions as a non-covalent homodimer with a conserved cystine-knot structure and shows complete amino acid sequence homology with mouse and rat BDNF. BDNF is abundantly expressed in the hippocampus and cerebellum and supports axonal guidance, dendritic development, synaptic plasticity, and memory formation through high-affinity activation of the TrkB receptor and downstream AKT and ERK signaling pathways. Recombinant BDNF is widely used as a cell culture supplement to promote neural differentiation and maturation and is highly relevant to regenerative medicine and neuroscience research.

Specifications

Synonyms:	Abrineurin; ANON2; BDNF; brain-derived neurotrophic factor; BULN2; MGC34632; Neurotrophin
AA Sequence:	HSDPARRGEL SVCDSISEWV TAADKKTAVD MSGGTVTVLE KVPVSKGQLK QYFYETKCNP MGYTKEGCRG IDKRHWNSQC RTTQSYVRAL TMDSKKRIGW RFIRIDTSCV CTLTIKRGR
Source:	<i>E. coli</i>
Molecular Weight:	13.5 kDa

Quality Control

Purity	> 95%
Physical Appearance:	White lyophilized powder.
Endotoxin:	<0.1 ng/μg of protein (<1 EU/μg)

Formulation

Lyophilized from a 0.2μm filtered concentrated solution in 1x PBS with dextran as protectant.

Rev. 0

Reconstitution

Reconstitute in sterile distilled water or 1x PBS containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.

Shipping and Storage

Gel pack. Upon receipt, store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.

Usage

rhBDNF is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.