

# Recombinant Human Brain-derived Neurotrophic Factor

Cat. No. BDNF-64H Lot. No. (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant Human Brain-derived Neurotrophic Factor produced in <i>E. Coli</i> as a homodimer, non-glycosylated, polypeptide chain containing 2 x 119 amino acids and having a total molecular mass of 26,984 Dalton. BDNF is purified by proprietary chromatographic techniques.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	BDNF promotes the survival of neuronal populations that are all located either in the central nervous system or directly connected to it. Major regulator of synaptic transmission and plasticity at adult synapses in many regions of the CNS. The versatility of bdnf is emphasized by its contribution to a range of adaptive neuronal responses including long-term potentiation (LTP), long-term depression (LTD), certain forms of short-term synaptic plasticity, as well as homeostatic regulation of intrinsic neuronal excitability.
<b>Amino Acid Sequence</b>	The sequence of the first five N-terminal amino acids was determined and was found to be Met-His-Ser-Asp-Pro
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	Greater than 96.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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<b>Formulation</b>	The protein was lyophilized after dialysis against 20mM sodium citrate buffer pH=5.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized Brain-derived Neurotrophic Factor in sterile 18MΩ-cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
<b>Biological Activity</b>	The ED50, calculated by the dose-dependant induction of ACHE (acetylcholine esterase) in rat basal forebrain primary septal culture is 50 ng/ml.
<b>Protein content</b>	BDNF quantitation was carried out by two independent methods: 1.UV spectroscopy at 280 nm using the absorbency value of 1.6 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of Brain-derived Neurotrophic Factor as a Reference Standard.
<b>Storage</b>	Lyophilized BDNF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Brain-derived Neurotrophic Factor should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

<b>Gene Name</b>	BDNF brain-derived neurotrophic factor [ Homo sapiens ]
<b>Synonyms</b>	BDNF; MGC34632; Abrineurin; neurotrophin; Brain-derived neurotrophic factor; NP_733927.1 5` and 3` partial
<b>Gene ID</b>	627

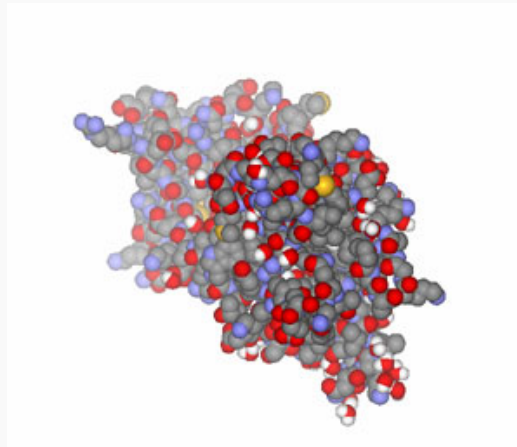
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<b>mRNA Refseq</b>	<a href="#">NM_001143806</a>
<b>Protein Refseq</b>	<a href="#">NP_001137278</a>
<b>MIM</b>	<a href="#">113505</a>
<b>UniProt ID</b>	<a href="#">P23560</a>
<b>Chromosome Location</b>	11p13
<b>Pathway</b>	Huntington"s disease; MAPK signaling pathway;Neurotrophin signaling pathway
<b>Function</b>	Growth factor activity

**PDB rendering based on 1bnd**



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