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## DATASHEET

### Recombinant human BDNF protein

#### Product overview

<b>Name</b>	Recombinant human BDNF protein
<b>Cat No</b>	HB3485
<b>Description</b>	Member of the neurotrophin growth factor family. Plays an important role in synaptic plasticity and neurogenesis.
<b>Species of origin</b>	Human
<b>Alternative names</b>	Brain-derived neurotrophic factor, MGC34632
<b>Biological action</b>	Activator
<b>Purity</b>	>97%

#### Images



#### Biological Data

<b>Application notes</b>	ED <sub>50</sub> = 1.3-2 µg/ml (determined by the dose-dependent induction of C6 cells proliferation)
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#### Solubility & Handling

<b>Storage instructions</b>	-20°C
<b>Solubility overview</b>	Soluble in sterile deionized water (not less than 100 µg/ml)
<b>Handling</b>	<ul style="list-style-type: none"><li>• Solutions should be made in sterile deionized water (not less than 100 µg/ml). This solution can then be further diluted with other aqueous solutions.</li><li>• Following reconstitution, solutions may be stored at 4°C and are useable for around 2-7 days.</li><li>• For long term storage, a carrier protein (0.1% HSA or BSA) should be added to stock solutions. Solutions should be aliquoted into tightly sealed vials for storage at -20°C. Freeze-thaw cycles should be prevented.</li></ul>
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

#### Chemical Data

<b>Chemical name</b>	Brain-derived neurotrophic factor human recombinant produced in E. Coli. Homodimer, non-glycosylated polypeptide containing 2 x 119 amino acids and an N-terminal Met. Total molecular mass ~27000. Purified by proprietary chromatography methods.
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<b>Molecular Weight</b>	27000
<b>Sequence (one letter)</b>	MHSDPARRGE LSVCDISEW VTAADKKTAV DMSGGTVTVL EKVPVSKGQL KQYFYETKCN PMGYTKEGCR GIDKRHWNSQ CRTTQSYVRA LTMDSKKRIG WRFIRIDTSC VCTLTIKRGR
<b>CAS Number</b>	218441-99-7
<b>Source</b>	Escherichia Coli
<b>Appearance</b>	White solid
<b>Formulation</b>	Sterile filtered, white lyophilized powder (protein lyophilized without any additives)
<b>Protein length</b>	2 x 119 AA

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## References

### Brain-derived neurotrophic factor.

Binder and Scharfman (2004) Growth Factors 22(3)

**PubMedID** [15518235](#)

### Cultured hippocampal neurons show responses to BDNF, NT-3, and NT-4, but not NGF.

Ip et al (1993) J Neurosci 13(8)

**PubMedID** [7688038](#)

### The ability of BDNF to modify neurogenesis and depressive-like behaviors is dependent upon phosphorylation of tyrosine residues 365/367 in the GABA(A)-receptor $\gamma$ 2 subunit.

Vithlani et al (2013) J Neurosci 33(39)

**PubMedID** [24068823](#)

### Neurotrophins: roles in neuronal development and function.

Huang and Reichardt (2001) Annu Rev Neurosci 24

**PubMedID** [11520916](#)

### BDNF function in adult synaptic plasticity: the synaptic consolidation hypothesis.

Bramham and Messaoudi (2005) Prog Neurobiol 76(2)

**PubMedID** [16099088](#)

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