

## Recombinant Human BDNF (Brain Derived Neurotrophic Factor)

**Catalog Number: RP100-01**

Accession Number: P23560

### Specifications and Uses:

**Alternate Names:** None

**Description:**

Brain Derived Neurotrophic Factor, or BDNF, is a nerve growth factor that supports neuron growth and survival. BDNF shares identical domains with two other neurotrophic factors known as,  $\beta$ -NGF and NT-3 (neurotrophin-3). BDNF binds with low affinity to a receptor known as LNGFR, which also binds NGF and NT-3, but mediates survival function by signaling through a high affinity receptor known as gp145/TrkB. Human, mouse, rat and pig BDNF are all cross-reactive. Recombinant human BDNF is a non-glycosylated homodimer, containing two 119 amino acid chains, with a total molecular weight of 27 kDa.

**Source:** *E.coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation and Stability:**

Recombinant human BDNF is lyophilized with no additives.

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/mL, which can be further diluted into other aqueous solutions.

**Protein Content and Purity (typically  $\geq 97\%$ ) determined by:**

HPLC, Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm

**Endotoxin Level:**

Measured by kinetic LAL analysis and is typically  $\leq 1$  EU/ $\mu$ g protein.

**Biological Activity:**

The activity is determined by the dose-dependent proliferation of C6 cells and is typically between 0.5-1.5  $\mu$ g/mL.

**AA Sequence:**

MHSDPARRGE LSVCDISEW VTAADKKTAV DMSGGTVTVL EKVPVSKGQL KQYFYETKCN PMGYTKEGCR  
GIDKRHWNSQ CRTTQSYVRA LTMDSKKRIG WRFIRIDTSC VCTLTIKRGR

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**