Recombinant Human Brain-derived Neurotrophic Factor (rh BDNF)

**Synonyms:** MGC34632

**Introduction:** BDNF promotes the survival of neuronal populations that are all located either in the central nervous system or directly connected to it. BDNF is a 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.

**Description:** Recombinant Human BDNF produced in E.Coli is a homodimer, non-glycosylated polypeptide chain containing 2x 119 amino acids (and N-terminal Met) and having a total molecular mass of 27 kDa. BDNF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*

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

**Formulation:** Lyophilized without any additives. The aliquots of 1µg and 2 µg contain Trehalose 5% (w/vol) for better recovery.

**Solubility:** It is recommended to reconstitute the lyophilized rh BDNF in sterile H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh BDNF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rh BDNF 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.

**Purity:** Greater than 97.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

**Amino Acid Sequence:** MHSDPARRGE LSVCDSISEW VTAADKKTAV DMSGGTVTVL EKVPVSKGQL KQYFYETKCN PMGYTKEGCR GIDKRHWNSQ CRTTQSYVRA LTMDSKKRGW RFIRIDTSC VCTLTIKRGR.

**Biological Activity:** The ED50, as determined by the dose-dependant induction of C6 cells proliferation, is 1.3 – 2 µg/ml

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