



Brain Derived Neurotrophic Factor, human recombinant (rHuBDNF)

Catalog No: 52615
Lot No: XXXXX
Source: *E. coli*
Synonyms: Brain-Derived Neurotrophic Factor, BDNF, MGC34632

Background

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

Brain-Derived Neurotrophic Factor human recombinant produced in *E. coli* is a homodimer, non-glycosylated, polypeptide chain containing 2 x 119 amino acids (with an N-terminal Met) having a total molecular mass of 27 kDa. BDNF human recombinant is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized without any additives.

Solubility

It is recommended to reconstitute the lyophilized BDNF in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized BDNF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution 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 LSVCDSESEW VTAADKKTAV DMSGGTVTVL EKVPVSKGQL KQYFYETKCN PMGYTKEGCR GIDKRHWNSQ
CRTTQSYVRA LTMDSKRRIG WRFIRIDTSC VCTLTIKRGR

Activity

The ED₅₀, calculated by the dose-dependent induction of C6 cells proliferation is 1.3 – 2 µg/ml.

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