

Recombinant Mouse BDNF Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51315

Size: 10ug, 100ug

Protein Name: Neurotrophic factor BDNF precursor form (proBDNF) (Brain-derived neurotrophic factor) [Cleaved into: Neurotrophic factor BDNF]

Synonym: Bdnf

UniProt ID: P21237

UniProt Link: www.uniprot.org/uniprotkb/P21237/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 249 AA

Molecular Weight: 28 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTILFLTMVISYFGCMKAAPMKEVNVHGQGNLAYPGVIRTHGTLESVNGPRAGSRGLTTTSLADTFE
HVIEELLDEDQKVRPNEENHKDADLYTSRVMLSSQVPLEPPLLFLLEEKNYLDAANMSMRVRRHSD
PARRGELSVCDISSEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYTKEGC
RGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Neurotrophic factor BDNF precursor form (proBDNF) (Brain-derived neurotrophic factor) [Cleaved into: Neurotrophic factor BDNF] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Important signaling molecule that activates signaling cascades downstream of NTRK2 (PubMed:27457814). During development, promotes the survival and differentiation of selected neuronal populations of the peripheral and central nervous systems. Participates in axonal growth, pathfinding and in the modulation of dendritic growth and morphology. 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 (PubMed:15486301, PubMed:17023662, PubMed:27457814, PubMed:29909994, PubMed:8139657).; [Neurotrophic factor BDNF precursor form]: Important signaling molecule that activates signaling cascades downstream of NTRK2 (PubMed:27457814). Activates signaling cascades via the heterodimeric receptor formed by NGFR and SORCS2 (PubMed:24908487, PubMed:29909994). Signaling via NGFR and SORCS2 plays a role in synaptic plasticity and long-term depression (LTD) (PubMed:27457814). Binding to NGFR and SORCS2 promotes neuronal apoptosis (PubMed:24908487). Promotes neuronal growth cone collapse (PubMed:24908487, PubMed:27457814).

Subcellular Localization: Secreted .; [Neurotrophic factor BDNF precursor form]: Secreted . Note=A proportion of BDNF is secreted as immature precursor (proBDNF).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.