

Recombinant Rat NGF Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52325

Size: 10ug, 100ug

Protein Name: Beta-nerve growth factor (Beta-NGF)

Synonym: Ngf, Ngfb

UniProt ID: P25427

UniProt Link: www.uniprot.org/uniprotkb/P25427/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 241 AA

Molecular Weight: 27 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSMLFYTLITAFILIGVQAEPYTDSNVPEGDSVPEAHWTKLQHS�DTALRRARSAPAEPAAARVTGQT
RNITVDPKLFKKRRLRSPRVLFSTQPPPTSSDTLDLDFQAHGTISFNRTHRSKRSSTHPVFHMGFEFS
VCDSVSVWVGDKTTATDIKGKEVTVLGEVNINNSVFKQYFFETKCRAPNPVESGCRGIDSKHWNSY
CTTHTFVKALTDDKQAAWRFIRIDTACVCVLSRKAARRG

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 Beta-nerve growth factor (Beta-NGF) 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: Nerve growth factor is important for the development and maintenance of the sympathetic and sensory nervous systems. Extracellular ligand for the NTRK1 and NGFR receptors, activates cellular signaling cascades to regulate neuronal proliferation, differentiation and survival (By similarity). The immature NGF precursor (proNGF) functions as a ligand for the heterodimeric receptor formed by SORCS2 and NGFR, and activates cellular signaling cascades that lead to inactivation of RAC1 and/or RAC2, reorganization of the actin cytoskeleton and neuronal growth cone collapse. In contrast to mature NGF, the precursor form (proNGF) promotes neuronal apoptosis (in vitro) (By similarity). Inhibits metalloproteinase-dependent proteolysis of platelet glycoprotein VI (By similarity). Binds lysophosphatidylinositol and lysophosphatidylserine between the two chains of the homodimer. The lipid-bound form promotes histamine release from mast cells, contrary to the lipid-free form (By similarity).

Subcellular Localization: Secreted . Endosome lumen . Note=ProNGF is endocytosed after binding to the cell surface receptor formed by SORT1 and NGFR.

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.