Recombinant NGF protein (His tag)

Catalog Number	539659
Synonyms	Beta-NGF
Species	Human
Expression System	E. coli
Accession	P01138
Molecular Weight	Predictes a molecular mass of 14.25 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	130-241
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 130-241 aa (P01138) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Beta-Nerve Growth Factor (Beta-NGF) Fragment (residues 130-241) is a highly stable and soluble protein unit designed for structural and biochemical studies. This fragment retains key characteristics of the native protein, making it an ideal tool for investigating neuronal development, signaling pathways, and receptor interactions in a controlled experimental setting. Beta-Nerve Growth Factor (Beta-NGF), encoded by the NGF gene in humans, is essential for the development and maintenance of the sympathetic and sensory nervous systems. It functions as an extracellular ligand for the NTRK1 and NGFR receptors, activating signaling cascades that regulate neuronal proliferation, differentiation, and survival. The immature precursor (proNGF) interacts with SORCS2 and NGFR receptors, leading to cytoskeletal reorganization and growth cone collapse, while also promoting neuronal apoptosis in vitro. Additionally, Beta-NGF inhibits metalloproteinase-dependent proteolysis of platelet glycoprotein VI and, in its lipid-bound form, facilitates histamine release from mast cells. The protein is primarily secreted and can localize to the endosome lumen, with proNGF undergoing endocytosis upon binding to cell surface receptors. This fragment (residues 130-241) was selected to provide a stable, soluble representation for detailed analysis of Beta-NGF's functional properties.