

Recombinant Rat Nerve Growth Factor

#R00622

Size: 5 µg/100 µg/500 µg

Stability & Storage

Please use a manual defrost freezer and avoid repeated freeze-thaw cycles.

-Lyophilized protein should be stored at ≤ -20°C, stable for 12 months after receipt.

-Reconstituted protein solution can be stored at 2-8°C for 1-2 weeks.

-Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

(Nerve growth factor; also known as β-NGF and 2.5S NGF) is a 13-14 kDa secreted member of the neurotrophin family, cysteine knot superfamily of molecules. It is a noncovalent dimer expressed by a wide variety of cells including adipocytes, eosinophils, mast cells (DC), neurons, CD4+ and CD8+ T cells, activated astrocytes, keratinocytes, rodent submandibular gland epithelium and activated microglia plus Schwann cells. Rat β-NGF is synthesized as a precursor that is 241 amino acids (aa) in length. Based on mouse, it contains an 18 aa signal sequence, a 103 aa cleavable proregion, a 118 aa mature region (aa 122-239) and a two aa C-terminal propeptide. Based on mouse, there is likely to be a 307 aa isoform that utilizes an upstream alternative start site. Although proteolytic processing typically occurs intracellularly, proNGF is well recognized to be secreted, where it either undergoes extracellular proteolytic processing, or

remains intact to act as a bioactive isoform of NGF. Mature rat NGF shares 92% and 96% aa sequence identity with human and mouse NGF, respectively.

AA Sequence

Ser122-Gly241, Accession #P25427

Reconstitution

Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Reconstitute in sterile distilled water to a concentration of 0.1-1.0 mg/mL. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

Product Specification

Species	Rat
Source	CHO Cells
Molecular Weight	Recombinant Rat beta-NGF Protein, a noncovalently-linked homodimer, each subunit containing 120 amino acid residues, has a predicted molecular mass of approximately 26.8 kDa.
Purity	> 98% by SDS-PAGE gel and HPLC analyses.
Biological Activity	Measured in a cell proliferation assay using TF- 1 human erythroleukemic cells. The ED ₅₀ for this effect is 0.3-1.8 ng/mL.
Formulation	Lyophilized from a 0.22 µm filtered solution of in PBS. See CoA for details.

Endotoxin	Less than 0.1 EU/μg of rRtβ-NGF as determined by LAL test.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
