

## Recombinant Human Beta-NGF

**Catalog No :** PMK2197

**Known As:** Beta-Nerve Growth Factor; Beta-NGF; NGF; NGFB;  $\beta$ -NGF

### PROPERTIES

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Description        | Recombinant Human Beta-Nerve Growth Factor is produced by our E.coli expression system and the target gene encoding Ser122-Ala241 is expressed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Accession          | P01138                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Formulation        | Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Size               | 10 $\mu$ g/50 $\mu$ g/500 $\mu$ g/1mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Purity             | > 95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Endotoxin          | < 0.01 EU/ $\mu$ g as determined by LAL test.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Predicted Mol Mass | 13.4 KDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Apparent Mol Mass  | 14 KDa, reducing conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Reconstitution     | Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Shipping           | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Storage            | Lyophilized protein should be stored at $\leq -20^{\circ}\text{C}$ , stable for one year after receipt. Reconstituted protein solution can be stored at 2-8 $^{\circ}\text{C}$ for 2-7 days. Aliquots of reconstituted samples are stable at $\leq -20^{\circ}\text{C}$ for 3 months.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Background         | Human $\beta$ -Nerve Growth Factor ( $\beta$ -NGF) was initially isolated in the mouse submandibular gland. It is composed of three non-covalently linked subunits $\alpha$ , $\beta$ , and $\gamma$ ; it exhibits all the biological activities ascribed to NGF. It is structurally related to BDNF, NT-3 and NT-4 and belongs to the cysteine-knot family of growth factors that assume stable dimeric structures. B-NGF is a neurotrophic factor that signals through its receptor $\beta$ -NGF, and plays a crucial role in the development and preservation of the sensory and sympathetic nervous systems. B-NGF also acts as a growth and differentiation factor for B lymphocytes and enhances B-cell survival. These results suggest that $\beta$ -NGF is a pleiotropic cytokine, which in addition to its neurotropic activities may have an important role in the regulation of the immune system. Human $\beta$ -NGF shares 90% sequence similarity with mouse protein and shows cross-species reactivity. |

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