



Recombinant Protein Technical Manual  
Recombinant Mouse  $\beta$ -NGF/NGFB Protein (aa 130-239)(Active)  
RPES3849

### Product Data:

**Product SKU:** RPES3849

**Size:** 10 $\mu$ g

**Species:** Mouse

**Expression host:** E. coli

**Uniprot:** P01139

### Protein Information:

**Molecular Mass:** 12.4 kDa

**AP Molecular Mass:** 12 kDa

**Tag:**

**Bio-activity:** Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 0.5.5 ng/ml.

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per  $\mu$ g as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2  $\mu$ m filtered solution of 20mM Tris, 200mM NaCl, pH8.0.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Cell Culture

**Synonyms:** Beta-Nerve Growth Factor; Beta-NGF; NGF; NGFB

## Immunogen Information:

**Sequence:** Met130-Arg239

## Background:

NGF is the first member discovered in the Neurotrophin family, which includes brain-derived neurotrophic factor (BDNF), neurotrophin-3 (NT-3), and neurotrophin-4 (NT-4). These proteins belong to the cysteine-knot family of growth factors that assume stable dimeric structures. Mouse beta -NGF is a homodimer of two 120 amino acid polypeptides. It shares approximately 90% homology at the amino acid level with human beta -NGF and 95.8% with rat beta -NGF. NGF signaling has been shown to play an important role in neuroprotection and repair.  $\beta$ -NGF acts as a growth and differentiation factor for B lymphocytes, and enhances B-cell survival. It is a potent neurotrophic factor that signals through its receptor  $\beta$ -NGFR, and plays a crucial role in the development and preservation of the sensory and sympathetic nervous systems.