

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Arg109-Ile211
Accession # P39905

N-terminal Sequence Analysis Arg109

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 11.6 kDa (monomer)

SPECIFICATIONS

Activity Measured in a cell proliferation assay using SH-SY5Y human neuroblastoma cells.
The ED₅₀ for this effect is 2-12 ng/mL in the presence of Recombinant Human GFRα-1/GDNF Rα-1 Fc Chimera (Catalog # 714-GR).
The specific activity of recombinant human GDNF is approximately 3.1 x 10³ units/μg, which is calibrated against recombinant human GDNF Reference Standard (NIBSC code: 09/266).

Measured by its binding ability in a functional ELISA.
Immobilized Recombinant Human GFRα-1/GDNF Rα-1 Fc Chimera (Catalog # 714-GR) at 1 μg/mL can bind Recombinant Human GDNF with an apparent K_d <1 nM.

Endotoxin Level <1.0 EU per 1 μg of the protein by the LAL method.

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

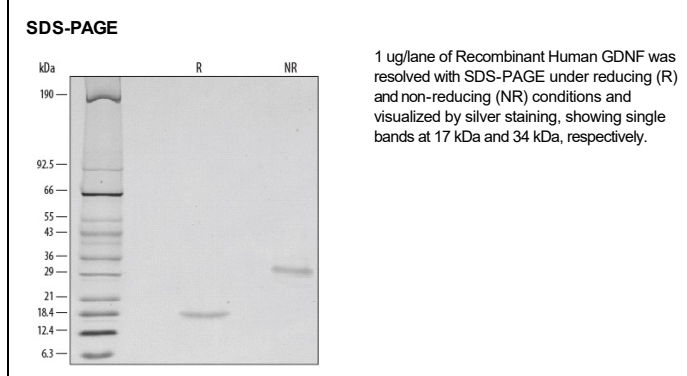
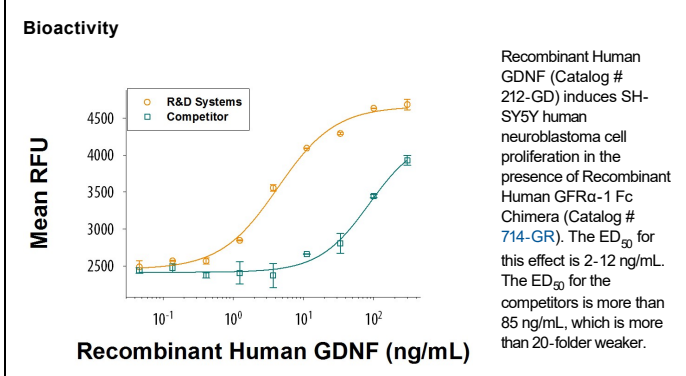
Reconstitution Reconstitute at 100 μg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

Glial Cell Line-derived Neurotrophic Factor (GDNF) is a neurotrophic factor that has been shown to promote the survival of various neuronal subpopulations in both the central as well as the peripheral nervous systems at different stages of their development. Neuronal subpopulations that have been shown to be affected by GDNF include motoneurons, midbrain dopaminergic neurons, Purkinje cells and sympathetic neurons.

Native GDNF, a disulfide-linked homodimeric glycoprotein, is a novel member of the TGF-β superfamily. Human GDNF cDNA encodes a 211 amino acid residue prepropeptide that is processed to yield a dimeric protein. Mature human GDNF was predicted to contain two 134 amino acid residue subunits. NS0 expressed mature human GDNF lacks 31 residues from the amino-terminus of the predicted sequence. This glycosylated recombinant mature human GDNF still contains the seven conserved Cys residues found in all members of the TGF-β superfamily and is biologically active. The GDNF sequence contains two potential glycosylation sites and insect cell-expressed recombinant rat GDNF proteins are glycosylated. Mature rat and human GDNF exhibit approximately 93% amino acid sequence identity and show considerable species cross-reactivity. Cells known to express GDNF include Sertoli cells, type 1 astrocytes, Schwann cells, neurons, pinealocytes and skeletal muscle cells.