



GDNF Recombinant Protein

CATALOG NUMBER: 40-509

Specifications	
SPECIES:	Murine
SOURCE SPECIES:	E. coli
SEQUENCE:	MSPDKQAAAL PRRERNRQAA AASPENSRGK GRRGQRGKNR GCVLTAIHLN VTDLGLGYET KEELIFRYCS GSCESAETMY DKILKNLSRS RRLTSDKVGQ ACCRPVAFDD DLSFLDDNLV YHILRKHSAK RCGCI
BIOLOGICAL ACTIVITY:	The ED50 was determined by the proliferation of rat C6 cells is ≤ 0.2 ng/mL, corresponding to a specific activity of $\geq 5 \times 10^6$ units/mg.

Properties	
PURITY:	Greater than 98% by SDS-PAGE gel and HPLC analyses. Endotoxin level is less than 0.1 ng per ug (1EU/ug).
PREDICTED MOLECULAR WEIGHT:	The calculated molecular weight of Recombinant Murine GDNF is 30.2 kDa
PHYSICAL STATE:	Lyophilized
STORAGE CONDITIONS:	The lyophilized GDNF recombinant protein is stable for at least 2 years from date of receipt at -20°C. Reconstituted GDNF is stable for at least 3 months when stored in working aliquots with a carrier protein at -20°C. As with any protein, exposing GDNF recombinant protein to repeated freeze / thaw cycles is not recommended. When working with proteins care should be taken to keep recombinant protein at a cool and stable temperature.

Additional Info	
ALTERNATE NAMES:	A1385739, Glial cell line-derived neurotrophic factor, Astrocyte-derived trophic factor, mGDNF
ACCESSION NO.:	NP_034405.1
PROTEIN GI NO.:	7110601

Background

GDNF is a disulfide-linked homodimeric neurotrophic factor structurally related to Artemin, Neurturin and Persephin. These proteins belong to the cysteine-knot superfamily of growth factors that assume stable dimeric protein structures. GDNF signals through a multicomponent receptor system, composed of a RET and one of the four GFR $\alpha(\alpha1-\alpha4)$ receptors. GDNF specifically promotes dopamine uptake and survival and morphological differentiation of midbrain neurons. Using Parkinson's disease mouse model, GDNF has been shown to improve conditions such as bradykinesia, rigidity, and postural instability. The functional murine GDNF ligand is a disulfide-linked homodimer, of two 15.1 kDa polypeptide chains called monomers. Each monomer contains seven conserved cysteine residues, one of which is used for inter-chain disulfide bridging and the others are involved in intramolecular ring formation known as the cysteine knot configuration.

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