GDNF Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Glial-Derived Neurotrophic Factor, ATF-1

Cat. No.:

RBG10165002	(2 µg)
RBG10165010	(10 µg)
RBG10165100	(100 µg)

Description

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 GFRalpha (alpha1-alpha4) receptors. GDNF specifically promotes dopamine uptake and survival, and morphological differentiation of midbrain neurons. Using a Parkinson's disease mouse model, GDNF has been shown to improve conditions such as bradykinesia, rigidity, and postural instability. The functional human GDNF ligand is a disulfide-linked homodimer consisting of two 15 kDa polypeptide chains called monomers. Each monomer contains seven conserved cysteine residues, including Cys-101, which is used for inter-chain disulfide bridging, and others that are involved in the intramolecular ring formation known as the cysteine knot configuration. The calculated molecular weight of Recombinant Human GDNF is 30.4 kDa.

Research topic

Cardiovascular disease, Coronary artery disease, Neural tissue markers

Amino Acid Sequence

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MSPDKQMAVL PRRERNRQAA AANPENSRGK GRRGQRGKNR GCVLTAIHLN VTDLGLGYET KEELIFRYCS GSCDAAETTY
DKILKNLSRN RRLVSDKVGQ ACCRPIAFDD DLSFLDDNLV YHILRKHSAK RCGCI
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Source

E. coli

Purity

98%

Biological Activity

The ED_{50} was determined by the proliferation of rat C6 cells is ? 0.1 µg/ml, corresponding to a specific activity of ? 1×10^{5} units/mg.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

-20°C

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