

Recombinant Human Glial-derived Neurotrophic Factor (rh GDNF)

Synonyms: ATF1, ATF2, HFB1-GDNF

Introduction: GDNF promotes the survival and differentiation of dopaminergic neurons in culture, and is able to prevent apoptosis of motor neurons induced by axotomy. The encoded protein is processed to a mature secreted form that exists as a homodimer. The mature form of the protein is a ligand for the product of the RET (rearranged during transfection) protooncogene. In addition to the transcript encoding GDNF, two additional alternative transcripts encoding distinct proteins, referred to as astrocyte-derived trophic factors, have also been described. Mutations in this gene may be associated with Hirschsprung disease. GDNF enhances survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake.

Description: Recombinant human GDNF produced in E.Coli is a non-glycosylated disulfide-linked homodimer containing 2 x 135 amino acids and having a total molecular mass of approximately 30kDa. GDNF is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.2µm filtered concentrated solution in 1xPBS, pH 7.4. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery.

Solubility: It is recommended to reconstitute the lyophilized rh GDNF in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh GDNF although stable at room temperature for 3 weeks, should be stored desiccated below -18° C . Upon reconstitution rh GDNF should be stored for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles .

Purity: Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

Amino acid sequence:

MSPDKQMAVL PRRERNRQAA AANPENSARGK GRRGQRGKNR GCVLTAIHLN VTDLGLGYET KEELIFRYCS
GSCDAAETTY DKILKNLSRN RRLVSDKVGQ ACCRPIAFDD DLSFLDDNLV YHILRKHSAK RCGCI.

Biological Activity: Determined by the proliferation of rat C6 cells the ED50 is <0.1ng/ml, corresponding to a specific activity of > 1.0 x 10⁷ IU/mg.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11343792
<i>medium</i>	10 µg	Cat.N°	11343793
<i>large</i>	50 µg	Cat.N°	11343795

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