

Active Recombinant Human GDNF Protein (Arg109-Ile211), GMP Grade

Cat. No. GDNF-06HG Lot. No. (See product label)

SPECIFICATION

Product Overview	GMP recombinant human GDNF protein (Arg109-Ile211) without tag was expressed in Mouse myeloma cell line and manufactured and tested under cGMP guidelines.
Species	Human
Source	NS0
ProteinLength	Arg109-Ile211
Description	This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate each subunit of the disulfide-linked homodimer. The recombinant form of this protein, a highly conserved neurotrophic factor, was shown to promote the survival and differentiation of dopaminergic neurons in culture, and was able to prevent apoptosis of motor neurons induced by axotomy. This protein is a ligand for the product of the RET (rearranged during transfection) protooncogene. Mutations in this gene may be associated with Hirschsprung disease and Tourette syndrome. This gene encodes multiple protein isoforms that may undergo similar proteolytic processing.
Form	Disulfide-linked homodimer

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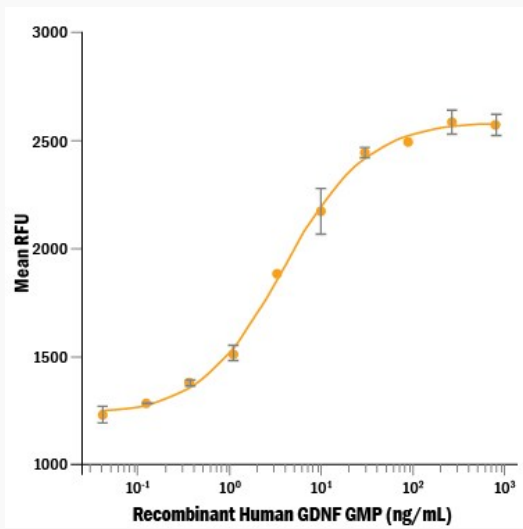
Bio-activity	Measured in a cell proliferation assay using SH-SY5Y human neuroblastoma cells. The ED50 for this effect is 2-12 ng/mL in the presence of Recombinant Human GFR alpha-1/GDNF R alpha-1 Fc Chimera. The specific activity of recombinant human GDNF is >5.0 x 10⁵ units/mg, which is calibrated against the human GDNF Reference Standard. Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human GFR alpha-1/GDNF R alpha-1 Fc Chimera at 1 µg/mL can bind Recombinant Human GDNF with an apparent K_d <1 nM.
Molecular Mass	Predicted Molecular Mass: 11.6 kDa (monomer)
N-terminal Sequence Analysis	Arg109-Gly-Gln-Arg-Gly-Lys-Asn-Arg-Gly-(Cys)
Endotoxin	<1.0 EU/ µg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE with silver staining, under reducing conditions.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 12 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, ≤ -20 centigrade under sterile conditions after reconstitution.
Storage Buffer	Lyophilized from a 0.2 µm filtered solution in PBS.
Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped with polar packs.

GENE INFORMATION

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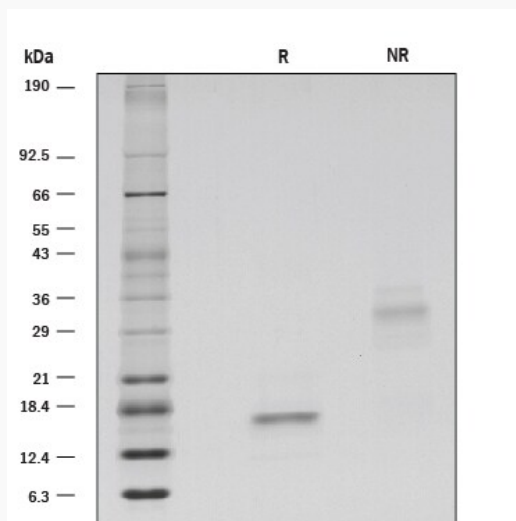
Gene Name	GDNF glial cell derived neurotrophic factor [Homo sapiens]												
Official Symbol	GDNF												
Synonyms	GDNF; glial cell derived neurotrophic factor; glial cell line-derived neurotrophic factor; astrocyte derived trophic factor; ATF1; ATF2; glial cell line derived neurotrophic factor; glial derived neurotrophic factor; HFB1 GDNF; ATF; astrocyte-derived trophic factor; HSCR3; HFB1-GDNF;												
Gene ID	2668												
mRNA Refseq	NM_000514												
Protein Refseq	NP_000505												
MIM	600837												
UniProt ID	P39905												
Bioactivity	 <table border="1"> <caption>Approximate data points from the bioactivity graph</caption> <thead> <tr> <th>Recombinant Human GDNF GMP (ng/mL)</th> <th>Mean RFU</th> </tr> </thead> <tbody> <tr><td>10⁻¹</td><td>1250</td></tr> <tr><td>10⁰</td><td>1500</td></tr> <tr><td>10¹</td><td>2200</td></tr> <tr><td>10²</td><td>2500</td></tr> <tr><td>10³</td><td>2600</td></tr> </tbody> </table>	Recombinant Human GDNF GMP (ng/mL)	Mean RFU	10 ⁻¹	1250	10 ⁰	1500	10 ¹	2200	10 ²	2500	10 ³	2600
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SDS-PAGE



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