

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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Bio-activity	<p>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.</p> <p>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.</p>
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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <p>A minimum of 12 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date.</p> <p>1 month, 2 to 8 centigrade under sterile conditions after reconstitution.</p> <p>3 months, ≤ -20 centigrade under sterile conditions after reconstitution.</p>
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.

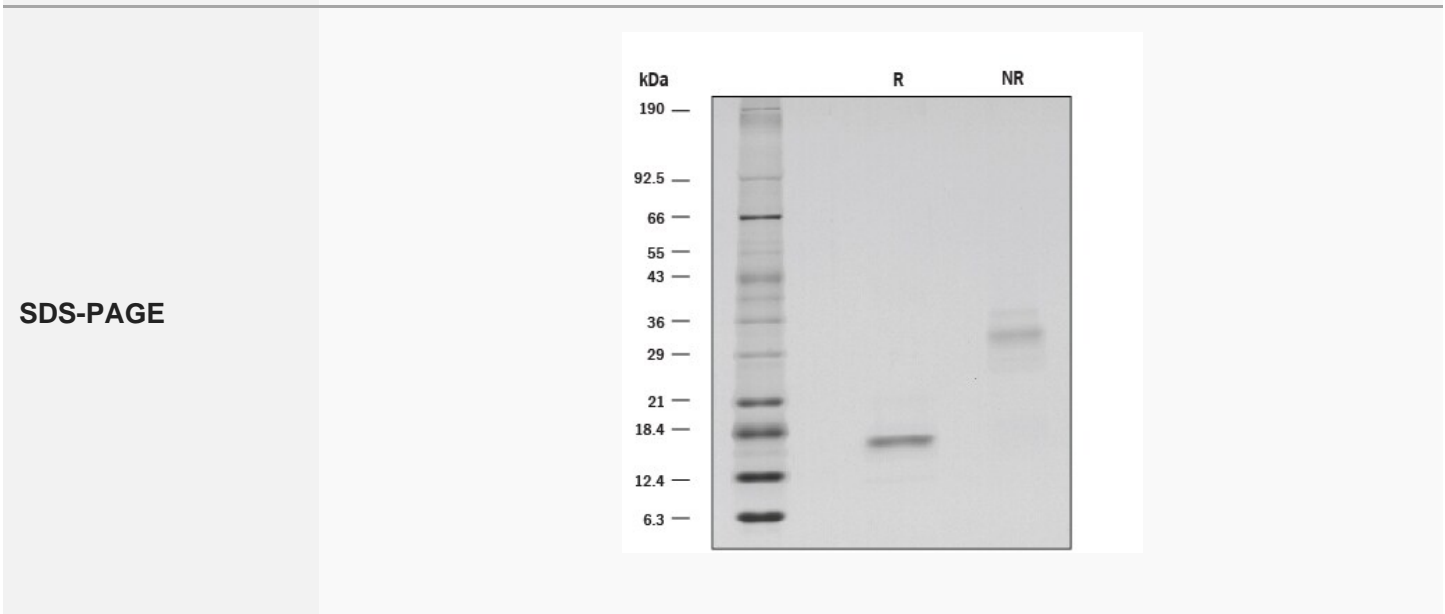
GENE INFORMATION

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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



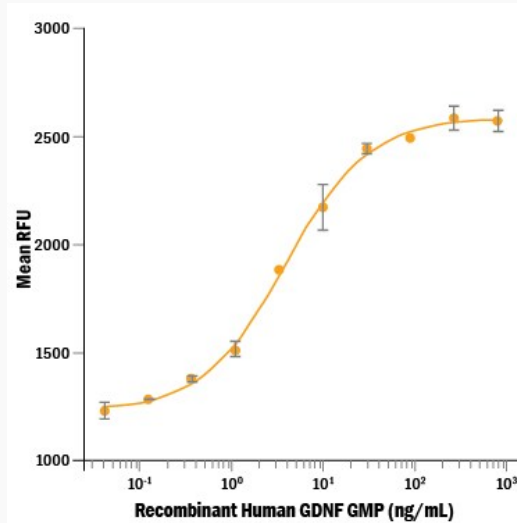
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Bioactivity



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