

# Recombinant Rat GFRA1/GDNFRA Protein (His Tag)

Catalog Number:PKSR030398



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

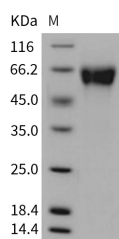
## Description

<b>Synonyms</b>	GFRA1;Gdnfra;Retl1;Trnr1;GFR alpha-1
<b>Species</b>	Rat
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Leu 445
<b>Accession</b>	Q62997-1
<b>Calculated Molecular Weight</b>	48.0 kDa
<b>Observed molecular weight</b>	58-65 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured in a cell proliferation assay using SH-SY5Y human neuroblastoma cells. The ED50 for this effect is typically 0.2-1 µg/mL in the presence of 40 ng/mL Recombinant Rat GDNF.

## Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 97 % as determined by reducing SDS-PAGE.

## Background

Glial cell line derived neurotrophic factor (GDNF) Family Receptor Alpha 1 (GFRA1) is a member of the GDNF receptor family. It is a glycosylphosphatidylinositol (GPI)-linked cell surface receptor for both GDNF and NTN, and mediates activation of the RET tyrosine kinase receptor. GFRA1 is a potent survival factor for central and peripheral neurons, and is essential for the development of kidneys and the enteric nervous system. Glial cell line-derived neurotrophic factor (GDNF) and neurturin (NTN) are its binding ligand which are two structurally related, potent

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neurotrophic factors that play key roles in the control of neuron survival and differentiation. GDNF promotes the formation of a physical complex between GFRA/GDNFRA and the orphan tyrosin kinase receptor Ret, thereby inducing its tyrosine phosphorylation. The RET is a receptor tyrosine kinase representing the signal-transducing molecule of a multisubunit surface receptor complex for the GDNF, in which GFRA / GDNFRA acts as the ligand-binding component. GDNF, a distantly related member of the transforming growth factor- $\beta$  (TGF- $\beta$ ) superfamily, and its receptor components: GFRA1, Ret and neural cell adhesion molecule (NCAM) have been recently reported to be expressed in the testis and to be involved in the proliferation regulation of immature Sertoli cells.

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