

# Recombinant Human GFRA1/GDNFRA Protein (aa 1-424, His Tag)



Catalog Number:PKSH031680

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

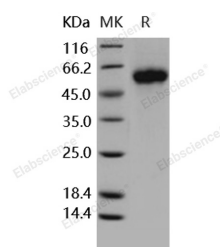
## Description

<b>Synonyms</b>	GDNF Family Receptor Alpha-1;GDNF Receptor Alpha-1;GDNFR-Alpha-1;GFR-Alpha-1;RET Ligand 1;TGF-Beta-Related Neurotrophic Factor Receptor 1;GFRA1;GDNFRA;RETL1;TRNR1
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Ser 424
<b>Accession</b>	NP_665736.1
<b>Calculated Molecular Weight</b>	46.0 kDa
<b>Observed molecular weight</b>	55-60 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	1. 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 Human GDNF. 2. Measured by its ability to bind human GDNF (native) in functional ELISA.

## Properties

<b>Purity</b>	> 98 % 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



> 98 % 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

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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 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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