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Recombinant Human GDNFR-alpha-1/GFRA1 Protein

Catalog No.: RP01970 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
human	2674	P56159-2

Tags
C-6His

Synonyms
GFRA1; GDNFRA; RETL1; TRNR1;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

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

Calculated MW	Observed MW
45.74 KDa	60-75 kDa

Endotoxin
< 0.01 EU/μg of the protein by LAL method

Formulation
Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

GDNFR-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 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-β (TGF-â) 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.

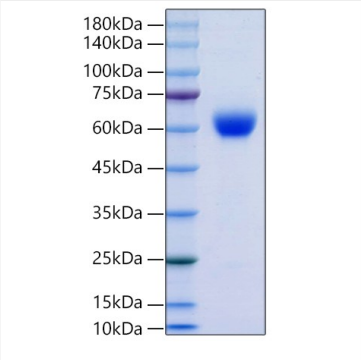
Basic Information

Description
Recombinant Human GDNFR-alpha-1/GFRA1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp25-Ile426) of Human GDNFR-alpha-1/GFRA1(Accession #NP_665736) fused with His at the C-terminus.

Bio-Activity

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human GDNFR-alpha-1/GFRA1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.