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

Catalog No. PKSH031680

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

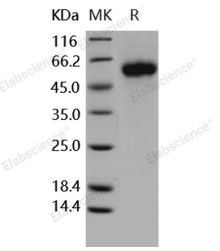
Description

Synonyms	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
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Ser 424
Accession	NP_665736.1
Calculated Molecular Weight	46.0 kDa
Observed molecular weight	55-60 kDa
Tag	C-His
Bioactivity	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

Purity	> 98 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	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.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 98 % as determined by reducing SDS-PAGE.

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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 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.

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