

Recombinant Rat GFRA1/GDNFRα Protein (His Tag)(Active)

Catalog No. PKSR030398

Description

Synonyms	GFRA1;Gdnfra;Retl1;Tnfr1;GFR alpha-1
Species	Rat
Expression_host	HEK293 Cells
Sequence	Met1-Leu445
Accession	Q62997-1
Mol_Mass	48 kDa
AP_Mol_Mass	58-65 kDa
Tag	C-His
Bio_activity	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

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg as determined by the LAL method.
Storage	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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4
Reconstitution	Please refer to the printed manual for detailed information.

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/GDNFRα 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 / GDNFRα acts as the ligand-binding component. GDNF, a distantly related member of the transforming growth factor-β (TGF-β) 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.

SDS-PAGE

