

Human GFRA2 / GFR α 2 / GDNFRB Protein (His Tag)

Catalog Number: 10331-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

GDNFRB; NRTNR-ALPHA; NTNRA; RETL2; TRNR2

Protein Construction:

A DNA sequence encoding the human GFR α 2 (NP_001486.4) without the propeptide (Met 1-Ser 441) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μ g of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 22

Molecular Mass:

The recombinant human GFR α 2 consists of 431 amino acids after removal of the signal peptide and predicts a molecular mass of 48.2 kDa. As a result of glycosylation, the apparent molecular mass of rhGFR α 2 is approximately 60-70 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

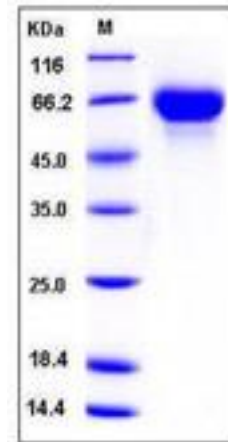
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

GFRA2 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. GFRA2 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/GDNFR α 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/GDNFR α acts as the ligand-binding component. Experiments have improved that GFRA2 genetic variants and age may play a role in Tardive dyskinesia (TD) susceptibility, but further work is required to confirm these findings.

References

1. Jing S, *et al.* (1997) GFR α -2 and GFR α -3 are two new receptors for ligands of the GDNF family. *J Biol Chem.* 272(52): 33111-7.
2. Souza RP, *et al.* (2010) Glial cell line-derived neurotrophic factor receptor α 2 (GFRA2) gene is associated with tardive dyskinesia. *Psychopharmacology.* 210(3): 347-54.
3. Vanhorne JB, *et al.* (2001) Cloning and characterization of the human GFRA2 locus and investigation of the gene in Hirschsprung disease. *Hum Genet.* 108(5): 409-15.

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