Canine GFRA1 / GFR alpha-1 Protein (His Tag)

Catalog Number: **70062-D08H**

General Information

Gene Name Synonym:

GFRA1

Protein Construction:

A DNA sequence encoding the canine GFRA1 (XP_852087.1) (Met1-Ser429) was expressed with a C-terminal polyhistidine tag.

Source: Canine

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

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

Stability:

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

Predicted N terminal: Asp 25

Molecular Mass:

The recombinant canine GFRA1 comprises 416 amino acids and has a predicted molecular mass of 46.8 kDa. The apparent molecular mass of the protein is approximately 54-58 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

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:

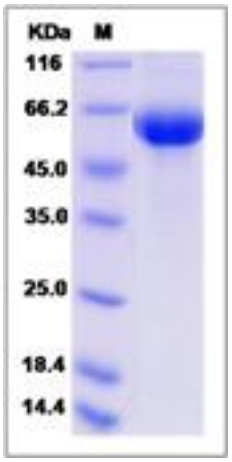
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1.Jing S, *et al*. (1997) GFRalpha-2 and GFRalpha-3 are two new receptors for ligands of the GDNF family. J Biol Chem. 272(52): 33111-7. 2.Jing S, *et al*. (1996) GDNF-induced activation of the ret protein tyrosine kinase is mediated by GDNFR-alpha, a novel receptor for GDNF. Cell. 85(7):1113-24. 3.Treanor JJ, *et al*. (1996) Characterization of a multicomponent receptor for GDNF. Nature. 382(6586): 80-3.