**General Information**

**Gene Name Synonym:**
GDNFR3

**Protein Construction:**
A DNA sequence encoding the human GFRA3 (NP_001487.2) (Met 1-Trp 382) was expressed, fused with the a C-terminal polyhistidine tag.

**Source:** Human

**Expression Host:** Human Cells

**QC Testing**

- **Purity:** > 90 % 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 °C

**Predicted N terminal:** Asp 32

**Molecular Mass:**
The recombinant human GFRA3 consists of 362 amino acids and predicts a molecular mass of 40.8 kDa. As a result of glycosylation, the apparent molecular mass of rhGFRA3 is approximately 50 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**
Glial cell line derived neurotrophic factor (GDNF) Family Receptor Alpha 3 (GFRA3) or GDNFRα3 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. GFRA3 / GDNFRα3 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. The neurotrophic growth factor artemin binds selectively to GDNF family receptor α3 (GFRA3 / GDNFRα3), forming a molecular complex with the co-receptor RET which mediates downstream signaling. This signaling pathway has been demonstrated to play an important role in the survival and maintenance of nociceptive sensory neurons and in the development of sympathetic neurons.

**References**