



Recombinant Protein Technical Manual  
Recombinant Mouse GFRA3/GFR-alpha-3 Protein (Fc  
Tag)  
RPES1390

#### Product Data:

**Product SKU:** RPES1390

**Size:** 50µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** O35118

#### Protein Information:

**Molecular Mass:** 66.2 kDa

**AP Molecular Mass:** 70 kDa

**Tag:** C-Fc

**Bio-activity:**

**Purity:** > 80 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** 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.

**Application:**

**Synonyms:** GFRalpha3;Y15110

## Immunogen Information:

**Sequence:** Met 1-Arg 379

## Background:

Glial cell line derived neurotrophic factor (GDNF) Family Receptor Alpha 3 (GFRA3) or GDNFRa3 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 / GDNFRa3 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. The neurotrophic growth factor artemin binds selectively to GDNF family receptor  $\alpha$ 3 (GFRA3 / GDNFRa3), 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.