



Catalog Number: 50171-R013

General Information	
<b>Immunogen:</b>	Recombinant Mouse GFRA1 Protein (Catalog#50171-M08H)
<b>Clone ID:</b>	013
<b>Ig Type:</b>	Rabbit IgG
<b>Applications:</b>	ELISA
<b>Specificity:</b>	Mouse GFRA1
<b>Formulation:</b>	PBS, 5% Trehalose
<b>Storage:</b>	< -20°C

#### Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Mouse GFRA1 (rM GFRA1; Catalog#50171-M08H; AAB86600.1; Met1-Ser425).

#### Applications

**Direct ELISA** – This antibody can be used at 0.1-0.2 µg/mL with the appropriate secondary reagents to detect Mouse GFRA1.

#### Specificity

Mouse GFRA1

#### Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

#### 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.

#### Reference

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.

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.

Treanor JJ, *et al.* (1996) Characterization of a multicomponent receptor for GDNF. *Nature.* 382(6586): 80-3.