

# Human GNGT1 / GNG1 Protein (His Tag)

Catalog Number: 13658-H07E



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

GNG1; G(y)1; Gng1

### Protein Construction:

A DNA sequence encoding the mature foem of human GNGT1 (P63211) (Pro 2-Cys 71) was expressed, with a polyhistide tag at the N-terminus.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Endotoxin:

Please contact us for more information.

### Stability:

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

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human GNGT1 consisting of 85 amino acids and has a calculated molecular mass of 9.9KDa. It migrates as a 9.0 kDa band in SDS-PAGE under reducing conditions as predicted.

### 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:

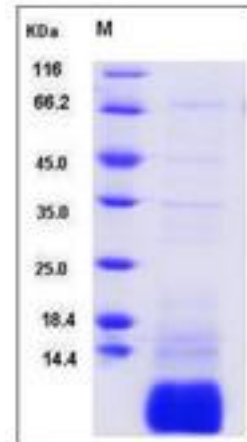
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

GNGT1 is a subunit of of transducin. Heterotrimeric G proteins consist of alpha, beta, and gamma subunits. They are membrane bound GTPases that are linked to 7-TM receptors. They function as signal transducers for the 7-transmembrane-helix G protein-coupled receptors. They are involved as a modulator or transducer in various transmembrane signaling systems. G proteins are bound to GDP in the 'off' state. GNGT1 is the gamma subunit of transducin. Ligand-receptor binding results in detachment of the G protein, switching it to an 'on' state and permitting Galpha activation of second messenger signalling cascades. There are several types of Galpha proteins; in addition, some Gbetagamma subunits have active functions. Gbetagamma coupled to H1 receptors can activate PLA2 and Gbetagamma coupled to M1 receptors can activate KIR channels. The beta and gamma chains are required for the GTPase activity, for replacement of GDP by GTP, and for G protein-effector interaction.

## References

- 1.Tao L, *et al.* (1993) Structure of the bovine transducin gamma subunit gene and analysis of promoter function in transgenic mice. *Exp Eye Res.* 56 (4): 497-507.
- 2.Yan K, *et al.* (1996) Differential ability to form the G protein betagamma complex among members of the beta and gamma subunit families. *J Biol Chem.* 271 (12): 7141-6.
- 3.Gaudet R, *et al.* (1999) A molecular mechanism for the phosphorylation-dependent regulation of heterotrimeric G proteins by phosducin. *Mol Cell.* 3 (5): 649-60.

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