

## GGTase-I

### Protein geranylgeranyltransferase type I, $\alpha$ - and $\beta$ -subunit

rat, recombinant, *E. coli*

Cat. No.	Amount
PR-101	50 $\mu$ g

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -80°C

#### Avoid freeze / thaw cycles

#### Form

Liquid. Supplied in 25 mM HEPES, pH 7.2, 40 mM NaCl and 5 mM DTT.

#### Molecular Weight

$\alpha$  44 kDa and  $\beta$  38 kDa

#### Activity

1 pmol of GGTase-I will transfer 5 pmol of Farnesyl to RhoA in 15 min at 37°C.

#### Purity

> 90% by SDS-PAGE

#### Description

GGTase-I (Geranylgeranyltransferase-I) catalyzes the transfer of the farnesyl and geranylgeranyl groups from farnesyl and geranylgeranyl-diphosphate to proteins containing a C-terminal CaaX motif, where 'C' is a conserved cysteine that is the site of farnesyl modification, 'a' is usually an aliphatic amino acid, and 'X' is leucine or phenylalanine.

Farnesyltransferase (FT) and GGTase-I are closely related, sharing a common  $\alpha$  subunit and 30% identity in their  $\beta$  subunits.

#### Selected References:

Lackner *et al.* (2005) Chemical genetics identifies Rab geranylgeranyl transferase as an apoptotic target of farnesyl transferase inhibitors. *Cancer Cell*. **7**:325.

Yokoyama *et al.* (1993) Purification of a mammalian protein geranylgeranyltransferase. Formation and catalytic properties of an enzyme-geranylgeranyl pyrophosphate complex. *J. Biol. Chem.* **268**:4055.

Hooff *et al.* (2008) Isoprenoid quantitation in human brain tissue: a validated HPLC-fluorescence detection method for endogenous farnesyl-(FPP) and geranylgeranylpyrophosphate (GGPP). *Analytical and Bioanalytical Chemistry*. **392**(4):673-680.

Watanabe *et al.* (2008) Inhibitors of Protein Geranylgeranyltransferase I and Rab Geranylgeranyltransferase Identified from a Library of Allenoate-derived Compounds. *J. Biol. Chem.* **283**(15):9571-9579.

Eckert *et al.* (2009) Regulation of the brain isoprenoids farnesyl- and geranylgeranylpyrophosphate is altered in male Alzheimer patients. *Neurobiology of Disease* **35**(2):251-257.

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