

Recombinant Rat Rab Geranylgeranyltransferase, Alpha Subunit

Cat. No. Rabggt-326R **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species

Rat

Source

E.coli

Description

GGTase-II (Geranylgeranyltransferase-II) catalyzes the transfer of geranylgeranyl moiety onto two C-terminal cysteines of Rab proteins. Composed of an and heterodimer (50 and 38 kDa, respectively) and requires Rab escort protein for its catalytic activity. GGTase-II was shown to exhibit higher affinity towards geranylgeranyl pyrophosphate ($K_d = 8$ nM) than farnesyl pyrophosphate ($K_d = 60$ nM). Like FTase and GGTase-I, RabGGT functions as a heterodimer. The subunit has 27% identity to that of CaaX prenylases but contains additional domains, while the subunit shows 29% identity to that of FTase. The protein substrates of RabGGT have heterogeneous C termini that usually contain two cysteine residues (CXC), both of which are modified by geranylgeranyl groups. Unlike the CaaX prenylases, RabGGT requires specific accessory proteins known as REPs to guide the interaction with its targets. Some farnesyltransferase inhibitors (FTIs) were identified to inhibit RabGGT activity and induce p53 independent apoptosis in *C. elegans*.

Purity

> 95% by SDS-PAGE.

Form

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

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Usage For in vitro use only.

Storage Quality guaranteed for 12 months. Store at -80°C. Avoid freeze / thaw cycles.

GENE INFORMATION

Gene Name Rabggtg Rab geranylgeranyltransferase, alpha subunit [Rattus norvegicus]

Synonyms Rabggtg; Rab geranylgeranyltransferase, alpha subunit

Gene ID 58983

mRNA Refseq NM_031654

Protein Refseq NP_113842

UniProt ID Q08602

Chromosome Location 15p13

Function Rab geranylgeranyltransferase activity; metal ion binding; protein binding; protein prenyltransferase activity; transferase activity; zinc ion binding

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