

# GGTase-I $\beta$ (H-220): sc-292406

## BACKGROUND

Eukaryotic cells contain three distinct prenyltransferases that catalyze the attachment of a thioether-linked 15-carbon farnesyl group or 20-carbon geranylgeranyl group to C-terminal cysteine residues. Geranylgeranyltransferase type I (GGTase-I, PGGTase-I) catalyzes the nucleophilic substitution reaction between geranylgeranyl diphosphate (GGPP) and a protein-derived thiol to form the thioether linkage. The candidate protein contains a C-terminal CAAX motif in which "A" is an aliphatic amino acid and "X" is leucine. Geranylgeranylation is necessary for the TGF- $\beta$ 1 signaling pathway, which involves phosphatidylcholine-specific phospholipase and a protein kinase C. Human GGTase-I contains an  $\alpha$  subunit and a  $\beta$  subunit. Geranylgeranyltransferase type II (GGTase-II) is a heterodimer that catalyzes the transfer of two 20-carbon geranylgeranyl groups from geranylgeranyl pyrophosphate onto C-terminal cysteine residues of Rab GTPases, which is required for the activity of Rab proteins. GGTase-II also contains an  $\alpha$  subunit and a  $\beta$  subunit.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PGGT1B (human) mapping to 5q22.3; Pgg1b (mouse) mapping to 18 C.

## SOURCE

GGTase-I $\beta$  (H-220) is a rabbit polyclonal antibody raised against amino acids 1-220 mapping at the N-terminus of GGTase-I $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GGTase-I $\beta$  (H-220) is recommended for detection of GGTase-I $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GGTase-I $\beta$  (H-220) is also recommended for detection of GGTase-I $\beta$  in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GGTase-I $\beta$  siRNA (h): sc-40882, GGTase-I $\beta$  siRNA (m): sc-40883, GGTase-I $\beta$  siRNA (r): sc-77357, GGTase-I $\beta$  shRNA Plasmid (h): sc-40882-SH, GGTase-I $\beta$  shRNA Plasmid (m): sc-40883-SH, GGTase-I $\beta$  shRNA Plasmid (r): sc-77357-SH, GGTase-I $\beta$  shRNA (h) Lentiviral Particles: sc-40882-V, GGTase-I $\beta$  shRNA (m) Lentiviral Particles: sc-40883-V and GGTase-I $\beta$  shRNA (r) Lentiviral Particles: sc-77357-V.

Molecular Weight of GGTase-I $\beta$ : 42 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **GGTase-I $\beta$  (D-11): sc-376854** or **GGTase-I $\beta$  (H-3): sc-376655**, our highly recommended monoclonal alternatives to GGTase-I $\beta$  (H-220).