

# GGTase-I $\beta$ (C-20): sc-18996

## 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 must contain 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.

## RESEARCH USE

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

## SOURCE

GGTase-I $\beta$  (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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.

Blocking peptide available for competition studies, sc-18996 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GGTase-I $\beta$  (C-20) 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), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

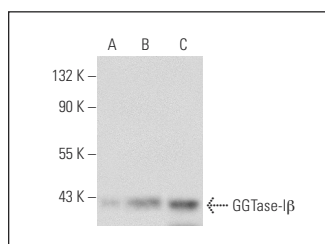
GGTase-I $\beta$  (C-20) is also recommended for detection of GGTase-I $\beta$  in additional species, including equine, canine, bovine and porcine.

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.

Positive Controls: HeLa whole cell lysate: sc-2200 or GGTase-I $\beta$  (h2): 293T Lysate: sc-128706.

## DATA



GGTase-I $\beta$  (C-20): sc-18996. Western blot analysis of GGTase-I $\beta$  expression in non-transfected 293T: sc-117752 (A), human GGTase-I $\beta$  transfected 293T: sc-128706 (B) and HeLa (C) whole cell lysates.

## STORAGE

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

## PROTOCOLS

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