

# GGPS1 (FL-300): sc-134709

## BACKGROUND

GGPS1 (geranylgeranyl diphosphate synthase 1), also known as GGPPS, GGPPSase (geranylgeranyl pyrophosphate synthetase) or GGPPS1, is a member of the FPP/GGPP synthetase family of *trans*-prenyltransferases. Predominantly expressed in testis, heart and skeletal muscle, GGPS1 localizes to the cytoplasm and catalyzes the formation of geranylgeranyl pyrophosphate (GGPP), a precursor of geranylgeranylated proteins and carotenoids. GGPP is a major isoprenoid responsible for the C20-prenylation of proteins and the regulation of the nuclear hormone receptor LXR $\alpha$ . More specifically, GGPS1 functions as an oligomeric molecule and mediates the condensation of farnesyl diphosphate (FPP) with isopentenyl diphosphate to yield GGPP. GGPS1 contains five amino acid motifs that are conserved in *trans*-prenyltransferases and three potential N-glycosylation sites.

## REFERENCES

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- Kainou, T., et al. 1999. Identification of the GGPS1 genes encoding geranylgeranyl diphosphate synthases from mouse and human. *Biochim. Biophys. Acta* 1437: 333-340.
- Kuzuguchi, T., et al. 1999. Human geranylgeranyl diphosphate synthase. cDNA cloning and expression. *J. Biol. Chem.* 274: 5888-5894.
- Okada, K., et al. 2000. Five geranylgeranyl diphosphate synthases expressed in different organs are localized into three subcellular compartments in Arabidopsis. *Plant Physiol.* 122: 1045-1056.
- Vicent, D., et al. 2000. The branch point enzyme of the mevalonate pathway for protein prenylation is overexpressed in the ob/ob mouse and induced by adipogenesis. *Mol. Cell. Biol.* 20: 2158-2166.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606982. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: GGPS1 (human) mapping to 1q42.3; Ggps1 (mouse) mapping to 13 A1.

## SOURCE

GGPS1 (FL-300) is a rabbit polyclonal antibody raised against amino acids 1-300 representing full length GGPS1 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.

## STORAGE

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

## APPLICATIONS

GGPS1 (FL-300) is recommended for detection of GGPS1 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).

GGPS1 (FL-300) is also recommended for detection of GGPS1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GGPS1 siRNA (h): sc-88605, GGPS1 siRNA (m): sc-145390, GGPS1 shRNA Plasmid (h): sc-88605-SH, GGPS1 shRNA Plasmid (m): sc-145390-SH, GGPS1 shRNA (h) Lentiviral Particles: sc-88605-V and GGPS1 shRNA (m) Lentiviral Particles: sc-145390-V.

Molecular Weight of GGPS1 monomer: 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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.

## 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.



Try **GGPS1 (E-1): sc-271680** or **GGPS1 (B-2): sc-271679**, our highly recommended monoclonal alternatives to GGPS1 (FL-300).