GGPS1 (E-1): sc-271680

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 LXRα. 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.

CHROMOSOMAL LOCATION

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

SOURCE

GGPS1 (E-1) is a mouse monoclonal antibody raised against amino acids 1-300 representing full length GGPS1 of human origin.

PRODUCT

Each vial contains 200 μg IgG2k kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GGPS1 (E-1) is available conjugated to agarose (sc-271680 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271680 HRP), 200 μg/ml, for WB, IF, IHC(P) and FCM; to BP-HRP (Cruz Marker): sc-516102 or m-IgG (A) HRP; to Alexa Fluor® 488 (sc-271680 AF488), Alexa Fluor® 546 (sc-271680 AF546), Alexa Fluor® 594 (sc-271680 AF594) or Alexa Fluor® 647 (sc-271680 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271680 AF680) or Alexa Fluor® 790 (sc-271680 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GGPS1 (E-1) is recommended for detection of GGPS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg 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).

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: GGPS1(h): 293T Lysate: sc-571311, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGx BP-FITC: sc-516140 or m-IgGx BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941.

DATA

GGPS1 (E-1) sc-271680. Western blot analysis of GGPS1 expression in non-transfected 293T: sc-117752 (A) human GGPS1 transfected 293T: sc-971311 (B), HeLa (C) and Jurkat (D) whole cell lysates and mouse kidney (E) and mouse testis (F) tissue extracts.

SELECT PRODUCT CITATIONS


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.