

# G3PP (G-13): sc-83333

## BACKGROUND

G3PP (glycerol-3-phosphate permease), also known as G-3-P transporter or solute carrier family 37 member 1, is a 533 amino acid protein belonging to the major facilitator superfamily. G3PP is a multi-pass membrane protein that acts as a transporter of or glycerol-3-phosphate between cellular compartments. Glycerol-3-phosphate is produced from glycerol and is an important factor in many biochemical pathways, including glycolysis. G3PP contains 12 putative transmembrane domains and N- and C-terminal endoplasmic reticulum (ER) retention signals. G3PP is expressed at highest levels in liver, kidney, small intestine, bone marrow and fetal tissues.

## REFERENCES

- Bartoloni, L., et al. 2000. Cloning and characterization of a putative human glycerol 3-phosphate permease gene (SLC37A1 or G3PP) on 21q22.3: mutation analysis in two candidate phenotypes, DFNB10 and a glycerol kinase deficiency. *Genomics* 70: 190-200.
- Hattori, M., et al. 2000. The DNA sequence of human chromosome 21. *Nature* 405: 311-319.
- Carroll, J.S., et al. 2005. Chromosome-wide mapping of estrogen receptor binding reveals long-range regulation requiring the forkhead protein FoxA1. *Cell* 122: 33-43.
- Pope, S.N. and Lee, I.R. 2005. Yeast two-hybrid identification of prostatic proteins interacting with human sex hormone-binding globulin. *J. Steroid Biochem. Mol. Biol.* 94: 203-208.
- Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 608094. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: SLC37A1 (human) mapping to 21q22.3; Slc37a1 (mouse) mapping to 17 A3.3.

## SOURCE

G3PP (G-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of G3PP of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83333 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

G3PP (G-13) is recommended for detection of G3PP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other SLC family members.

G3PP (G-13) is also recommended for detection of G3PP in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for G3PP siRNA (h): sc-91457, G3PP siRNA (m): sc-145290, G3PP shRNA Plasmid (h): sc-91457-SH, G3PP shRNA Plasmid (m): sc-145290-SH, G3PP shRNA (h) Lentiviral Particles: sc-91457-V and G3PP shRNA (m) Lentiviral Particles: sc-145290-V.

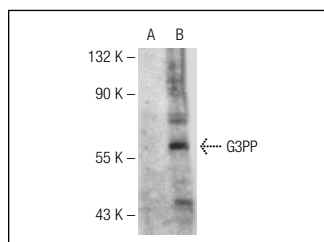
Molecular Weight of G3PP: 57 kDa.

Positive Controls: G3PP (h): 293T Lysate: sc-128661, K-562 whole cell lysate: sc-2203 or HEK293 whole cell lysate.

## 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.

## DATA



G3PP (G-13): sc-83333. Western blot analysis of G3PP expression in non-transfected: sc-117752 (A) and human G3PP transfected: sc-128661 (B) 293T whole cell lysates.

## RESEARCH USE

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