

For Research Use Only

# Phospho-GYS1 (Ser641) Polyclonal antibody



Catalog Number: 28855-1-AP

1 Publications

## Basic Information

Catalog Number:

28855-1-AP

Size:

300 µg/ml

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

BC007688

GeneID (NCBI):

2997

UNIPROT ID:

P13807

Full Name:

glycogen synthase 1 (muscle)

Calculated MW:

84 kDa

Observed MW:

84 kDa

Purification Method:

Protein A purification

Recommended Dilutions:

WB 1:2000-1:12000

IF 1:200-1:800

## Applications

Tested Applications:

IF/ICC, WB, ELISA

Cited Applications:

WB

Species Specificity:

Human

Cited Species:

mouse

Positive Controls:

WB: λ phosphatase treated PC-3 cells,

IF: λ phosphatase treated PC-3 cells,

## Background Information

Glycogen synthase 1 (GYS1, GS) catalyzes the key step of glycogen synthesis and plays an important role in glycogen metabolism in liver and muscle. In kidney tissues, glycogen synthase 1 (GYS1) is the most important rate-limiting enzyme functioning in the last step of glycogen synthesis. Pathologically, its deficiency has been shown to cause muscle glycogen storage disease type 0 and death. Studies of tumors showed that GYS1 was rapidly induced under hypoxic conditions and positively correlated with glycogen accumulation in glioblastoma, breast, and colon cancer cell lines. GYS1 is phosphorylated at nine sites and insulin stimulates dephosphorylation of glycogen synthase. Insulin stimulates dephosphorylation of glycogen synthase via PKB-mediated phosphorylation of GSK3. Phosphorylation of GSK3 decreases kinase activity which will decrease phosphorylation of GS and increase glycogen synthase fractional activity. (PMID: 32802186, PMID: 30443599, PMID: 22232606)

## Notable Publications

Author	Pubmed ID	Journal	Application
Xu Yang	38382654	J Ethnopharmacol	WB

## Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

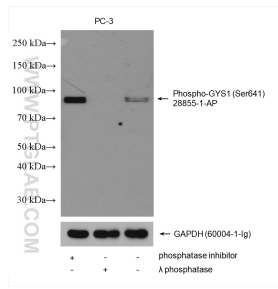
T: 4006900926

E: Proteintech-CN@ptglab.com

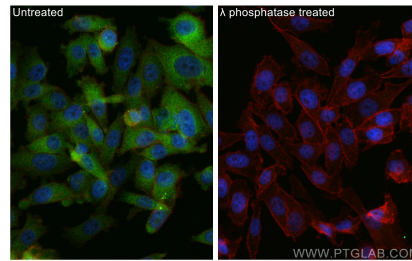
W: ptgcn.com

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## Selected Validation Data



Non-treated PC-3 cells, phosphatase inhibitor treated and  $\lambda$  phosphatase PC-3 cells were subjected to SDS PAGE followed by western blot with 28855-1-AP (Phospho-GYS1 (Ser641) antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Immunofluorescent analysis of (4% PFA) fixed  $\lambda$  phosphatase treated PC-3 cells using Phospho-GYS1 (Ser641) antibody (28855-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).