

# glycogen synthase 2 (N-20): sc-47109

## BACKGROUND

Glycogen [starch] synthase belongs to the mammalian/fungal glycogen synthase family of proteins. Two forms of this protein exist, a liver form and a muscle form, both of which have the same function in the glycogen biosynthesis pathway. Glycogen synthase transfers the glycosyl residue from UDP-Glucose to the nonreducing end of  $\alpha$ -1,4-glucan. The liver glycogen synthase protein is truncated by 34 amino acids compared to the muscle form. However, these enzymes differ significantly in their amino- and carboxyl-terminal regions. Muscle glycogen synthase serves to fuel muscular activity only and is regulated by muscle contraction and by catecholamines. Liver glycogen synthase mediates blood glucose homeostasis in response to nutritional cues. Defects in the gene encoding liver glycogen synthase results in glycogen storage disease type 0 (GSD0), a rare form of fasting ketotic hypoglycemia.

## CHROMOSOMAL LOCATION

Genetic locus: GYS2 (human) mapping to 12p12.1; Gys2 (mouse) mapping to 6 G2.

## SOURCE

glycogen synthase 2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of glycogen synthase 2 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-47109 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

glycogen synthase 2 (N-20) is recommended for detection of glycogen synthase 2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

glycogen synthase 2 (N-20) is also recommended for detection of glycogen synthase 2 in additional species, including equine and canine.

Suitable for use as control antibody for glycogen synthase 2 siRNA (h): sc-60946, glycogen synthase 2 siRNA (m): sc-60947, glycogen synthase 2 shRNA Plasmid (h): sc-60946-SH, glycogen synthase 2 shRNA Plasmid (m): sc-60947-SH, glycogen synthase 2 shRNA (h) Lentiviral Particles: sc-60946-V and glycogen synthase 2 shRNA (m) Lentiviral Particles: sc-60947-V.

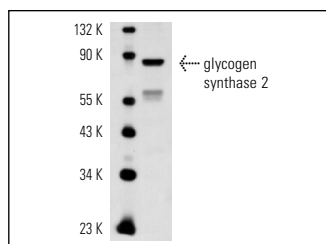
Molecular Weight of glycogen synthase 2: 81 kDa.

Positive Controls: c4 whole cell lysate: sc-364186.

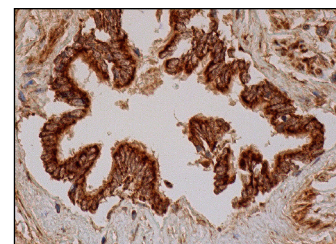
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



glycogen synthase 2 (N-20): sc-47109. Western blot analysis of glycogen synthase 2 expression in c4 whole cell lysate.



glycogen synthase 2 (N-20): sc-47109. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic and membrane staining of respiratory epithelial cells.

## 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.

## PROTOCOLS

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


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Try **glycogen synthase 2 (G-8): sc-390391**, our highly recommended monoclonal alternative to glycogen synthase 2 (N-20).