

Glycogenin-1 (H-40): sc-134539

BACKGROUND

Glycogen synthesis is initiated by the autoglucosylation of Glycogenin-1. Specifically, Glycogenin-1 glucosylates itself to begin the synthesis of glycogen in mammalian skeletal muscle. It acts as the primer to which further glucose monomers may be added. All of the Glycogenin-1 molecules contain at least one glucosyl residue before autoglucosylation begins. The first step of the glycogen synthesis occurs when a glucose molecule from UDP-glucose binds to the hydroxyl group of Tyr 194 on the Glycogenin-1 molecule. Using its glucosyltransferase activity, Glycogenin-1 adds more glucoses, each one coming from UDP-glucose. The glycosylation process reaches a plateau when five new glucose residues have been added, at which point glycogen synthase (GS) takes over and further elongates the chain. Glycogenin-1 remains covalently attached to the reducing end of the glycogen molecule.

REFERENCES

1. Pitcher, J., et al. 1988. Glycogenin-1 is the priming glucosyltransferase required for the initiation of glycogen biogenesis in rabbit skeletal muscle. *Eur. J. Biochem.* 176: 391-395.
2. van Maanen, M., et al. 1999. Characterization of mouse Glycogenin-1 cDNA and promoter region. *Biochim. Biophys. Acta* 1447: 284-290.

CHROMOSOMAL LOCATION

Genetic locus: GYG1 (human) mapping to 3q24; Gyg (mouse) mapping to 3 A2.

SOURCE

Glycogenin-1 (H-40) is a rabbit polyclonal antibody raised against amino acids 311-350 mapping at the C-terminus of Glycogenin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Glycogenin-1 (H-40) is recommended for detection of Glycogenin-1 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).

Glycogenin-1 (H-40) is also recommended for detection of Glycogenin-1 in additional species, including canine, bovine and porcine.

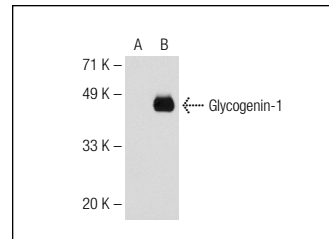
Suitable for use as control antibody for Glycogenin-1 siRNA (h): sc-60701, Glycogenin-1 siRNA (m): sc-60702, Glycogenin-1 shRNA Plasmid (h): sc-60701-SH, Glycogenin-1 shRNA Plasmid (m): sc-60702-SH, Glycogenin-1 shRNA (h) Lentiviral Particles: sc-60701-V and Glycogenin-1 shRNA (m) Lentiviral Particles: sc-60702-V.

Positive Controls: Glycogenin-1 (m): 293T Lysate: sc-120524, SJRH30 cell lysate: sc-2287 or 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.

DATA



Glycogenin-1 (H-40): sc-134539. Western blot analysis of Glycogenin-1 expression in non-transfected: sc-117752 (A) and mouse Glycogenin-1 transfected: sc-120524 (B) 293T whole cell lysates.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **Glycogenin-1 (E-11): sc-271109** or **Glycogenin-1 (4H8): sc-100537**, our highly recommended monoclonal alternatives to Glycogenin-1 (H-40).