SANTA CRUZ BIOTECHNOLOGY, INC.

Glycogenin-1 (A-14): sc-48173

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

Glycogenin-1 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-48173 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.

APPLICATIONS

Glycogenin-1 (A-14) 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 (A-14) is also recommended for detection of Glycogenin-1 in additional species, including equine, 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.

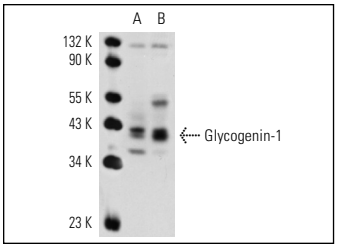
Molecular Weight of Glycogenin-1: 37 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or SJRH30 cell lysate: sc-2287.

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.

DATA



Glycogenin-1 (A-14): sc-48173. Western blot analysis of Glycogenin-1 expression in HeLa (**A**) and SJRH30 (**B**) whole cell lysates.

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 (A-14).