SANTA CRUZ BIOTECHNOLOGY, INC.

Glycogenin-2 (3L10): sc-134346

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glycogenin-2, also known as GYG2 or GN2, is a 501 amino acid protein that belongs to the glycogenin family and exists as six alternatively spliced isoforms, designated α, β, γ, δ, ε and ζ. Preferentially expressed in heart, pancreas and liver, Glycogenin-2 functions as a homodimer that uses divalent metal ions as cofactors to catalyze self-glucosylation, thereby producing an oligosaccharide primer that serves as a substrate for glycogen synthase and is thought to regulate glycogen accumulation within the cell. The gene encoding Glycogenin-2 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

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2. Mu, J., Skurat, A.V. and Roach, P.J. 1997. Glycogenin-2, a novel self-glucosylating protein involved in liver glycogen biosynthesis. J. Biol. Chem. 272: 27589-27597.
3. Roach, P.J., Cheng, C., Huang, D., Lin, A., Mu, J., Skurat, A.V., Wilson, W. and Zhai, L. 1998. Novel aspects of the regulation of glycogen storage. J. Basic Clin. Physiol. Pharmacol. 9: 139-151.
4. Mu, J. and Roach, P.J. 1998. Characterization of human Glycogenin-2, a self-glucosylating initiator of liver glycogen metabolism. J. Biol. Chem. 273: 34850-34856.
5. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 300198. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Zhai, L., Mu, J., Zong, H., DePaoli-Roach, A.A. and Roach, P.J. 2000. Structure and chromosomal localization of the human Glycogenin-2 gene GYG2. Gene 242: 229-235.
7. Zhai, L., Schroeder, J., Skurat, A.V. and Roach, P.J. 2001. Do rodents have a gene encoding Glycogenin-2, the liver isoform of the self-glucosylating initiator of glycogen synthesis? IUBMB Life 51: 87-91.
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CHROMOSOMAL LOCATION

Genetic locus: GYG2 (human) mapping to Xp22.33.

SOURCE

Glycogenin-2 (3L10) is a mouse monoclonal antibody raised against recombinant Glycogenin-2 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Glycogenin-2 (3L10) is recommended for detection of Glycogenin-2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Glycogenin-2 siRNA (h): sc-91341, Glycogenin-2 shRNA Plasmid (h): sc-91341-SH and Glycogenin-2 shRNA (h) Lentiviral Particles: sc-91341-V.

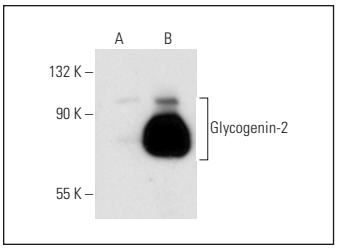
Molecular Weight of Glycogenin-2: 66 kDa.

Positive Controls: Glycogenin-2 (h): 293T Lysate: sc-113712.

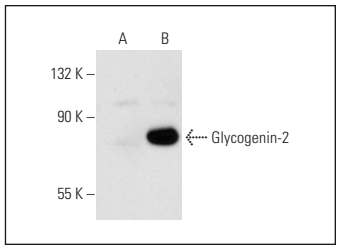
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Glycogenin-2 (3L10): sc-134346. Western blot analysis of Glycogenin-2 expression in non-transfected: sc-117752 (**A**) and human Glycogenin-2 transfected: sc-113712 (**B**) 293T whole cell lysates.



Glycogenin-2 (3L10): sc-134346. Western blot analysis of Glycogenin-2 expression in non-transfected: sc-117752 (**A**) and human Glycogenin-2 transfected: sc-176507 (**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 for detailed protocols and support products.