

GANC (D-1): sc-393697



The Power to Question

BACKGROUND

A key enzyme in glycogen degradation and metabolism, GANC (glucosidase, α ; neutral C) is a 914 amino acid protein with α -glucosidase activity that belongs to the glycosyl hydrolase 31 family and hydrolyzes non-reducing, terminal 1,4-linked α -D-glucose residues and releases α -D-glucose. The gene encoding GANC maps to human chromosome 15q15.1, a region associated with susceptibility to non-Insulin-dependent (type 2) diabetes mellitus, a disease characterized by high blood glucose levels. Human chromosome 15 houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

1. Martiniuk, F., et al. 1980. Human neutral α -glucosidase C: genetic polymorphism including a "null" allele. *Am. J. Hum. Genet.* 32: 497-507.
2. Martiniuk, F., et al. 1980. Assignment of the gene for human neutral α -glucosidase C to chromosome 15. *Cytogenet. Cell Genet.* 27: 168-175.
3. Cox, N.J., et al. 1999. Loci on chromosomes 2 (NIDDM1) and 15 interact to increase susceptibility to diabetes in Mexican Americans. *Nat. Genet.* 21: 213-215.
4. Hirschhorn, R., et al. 2002. Computer assisted cloning of human neutral α -glucosidase C (GANC): a new paralog in the glycosyl hydrolase gene family 31. *Proc. Natl. Acad. Sci. USA* 99: 13642-13646.
5. Kawabata, Y., et al. 2003. Newly identified exons encoding novel variants of p94/calpain 3 are expressed ubiquitously and overlap the α -glucosidase C gene. *FEBS Lett.* 555: 623-630.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 104180. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: GANC (human) mapping to 15q15.1.

SOURCE

GANC (D-1) is a mouse monoclonal antibody raised against amino acids 1-210 mapping at the N-terminus of GANC of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GANC (D-1) is available conjugated to agarose (sc-393697 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393697 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393697 PE), fluorescein (sc-393697 FITC), Alexa Fluor® 488 (sc-393697 AF488), Alexa Fluor® 546 (sc-393697 AF546), Alexa Fluor® 594 (sc-393697 AF594) or Alexa Fluor® 647 (sc-393697 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393697 AF680) or Alexa Fluor® 790 (sc-393697 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

GANC (D-1) is recommended for detection of GANC of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for GANC siRNA (h): sc-90048, GANC shRNA Plasmid (h): sc-90048-SH and GANC shRNA (h) Lentiviral Particles: sc-90048-V.

Molecular Weight of GANC: 104 kDa.

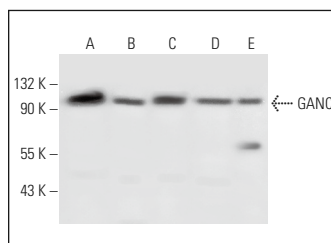
Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SUPPORT REAGENTS

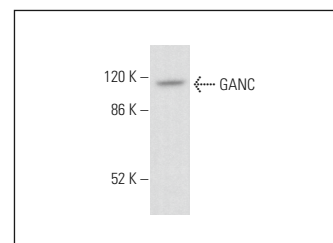
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).
- 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GANC (D-1): sc-393697. Western blot analysis of GANC expression in Jurkat (A), K-562 (B), HeLa (C) and Hep G2 (D) whole cell lysates and human liver tissue extract (E).



GANC (D-1): sc-393697. Western blot analysis of GANC expression in Jurkat whole cell lysate. Detection reagent used: m-IgG κ BP-HRP: sc-516102.

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.