# GNA1 (m): 293T Lysate: sc-120547



The Power to Question

## **BACKGROUND**

Glucosamine 6-phosphate N-acetyltransferase (GNA1), also designated phosphoglucosamine transacetylase or phosphoglucosamine acetylase, belongs to the GNA1 subfamily of the larger acetyltransferase family of proteins. GNA1, a peripheral membrane protein containing one N-acetyltransferase domain, is expressed in the colon and maps to cytoband 14q22.1. The protein localizes to the Golgi apparatus and the endosome. It is important for UDP-GlcNAc biosynthesis pathway. GNA1 catalyzes the synthesis of GlcNAc6P from AcCoA and GlcN6P, a step in the UDP-GlcNAc6P formation pathway.

# REFERENCES

- Boehmelt, G., Fialka, I., Brothers, G., McGinley, M.D., Patterson, S.D., Mo, R., Hui, C.C., Chung, S., Huber, L.A., Mak, T.W. and Iscove, N.N. 2000. Cloning and characterization of the murine glucosamine-6-phosphate acetyltransferase EMeg32. Differential expression and intracellular membrane association. J. Biol. Chem. 275: 12821-12832.
- Boehmelt, G., Wakeham, A., Elia, A., Sasaki, T., Plyte, S., Potter, J., Yang, Y., Tsang, E., Ruland, J., Iscove, N.N., Dennis, J.W. and Mak, T.W. 2000. Decreased UDP-GlcNAc levels abrogate proliferation control in EMeg32deficient cells. EMBO J. 19: 5092-5104.
- 3. Mio, T., Kokado, M., Arisawa, M. and Yamada-Okabe, H. 2000. Reduced virulence of *Candida albicans* mutants lacking the GNA1 gene encoding glucosamine-6-phosphate acetyltransferase. Microbiology 146: 1753-1758.
- 4. Peneff, C., Mengin-Lecreulx, D. and Bourne, Y. 2001. The crystal structures of Apo and light on the catalytic mechanism of an amino-sugar N-acetyltransferase. J. Biol. Chem. 276: 16328-16334.
- Jiang, H., Wang, S., Dang, L., Wang, S., Chen, H., Wu, Y., Jiang, X. and Wu, P. 2005. A novel short-root gene encodes a glucosamine-6-phosphate acetyltransferase required for maintaining normal root cell shape in rice. Plant Physiol. 138: 232-242.

#### **CHROMOSOMAL LOCATION**

Genetic locus: Gnpnat1 (mouse) mapping to 14 C1.

# **PRODUCT**

GNA1 (m): 293T Lysate represents a lysate of mouse GNA1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

# **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **APPLICATIONS**

GNA1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GNA1 antibodies. Recommended use: 10-20 µl per lane.

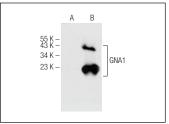
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GNA1 (A-3): sc-374519 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse GNA1 expression in GNA1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### **DATA**





GNA1 (A-3): sc-374519. Western blot analysis of GNA1 expression in non-transfected: sc-117752 (A) and mouse GNA1 transfected: sc-120547 (B) 293T whole cell lysates.

GNA1 (C-10): sc-374520. Western blot analysis of GNA1 expression in non-transfected: sc-117752 (A) and mouse GNA1 transfected: sc-120547 (B) 293T whole cell lysates.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.