SANTA CRUZ BIOTECHNOLOGY, INC.

GNA1 (K-13): sc-47002

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

1. Boehmelt, G., et al. 2000. Cloning and characterization of the murine glucosamine-6-phosphate acetyltransferase EMeg32. Differential expression and intracellular membrane association. J. Biol. Chem. 275: 12821-12832.
2. Boehmelt, G., et al. 2000. Decreased UDP-GlcNAc lev cells. EMBO J. 19: 5092-5104.
3. Mio, T., et al. 2000. Reduced virulence of *Candida albicans* mutants lacking the GNA1 gene encoding glucosamine-6-phosphate acetyltransferase. Microbiology 146: 1753-1758.
4. Peneff, C., et al. 2001. The crystal structures of Apo and light on the catalytic mechanism of an amino-sugar N-acetyltransferase. J. Biol. Chem. 276: 16328-16334.
5. Jiang, H., et al. 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 (human) mapping to 14q22.1; Gnpnat1 (mouse) mapping to 14 C1.

SOURCE

GNA1 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GNA1 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-47002 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.

PROTOCOLS

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

APPLICATIONS

GNA1 (K-13) is recommended for detection of GNA1 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GNA1 (K-13) is also recommended for detection of GNA1 in additional species, including equine, bovine, porcine and avian.

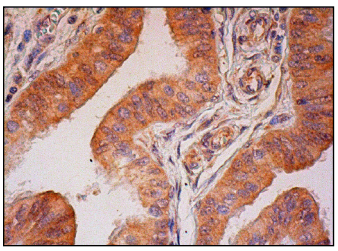
Suitable for use as control antibody for GNA1 siRNA (h): sc-60709, GNA1 siRNA (m): sc-60710, GNA1 shRNA Plasmid (h): sc-60709-SH, GNA1 shRNA Plasmid (m): sc-60710-SH, GNA1 shRNA (h) Lentiviral Particles: sc-60709-V and GNA1 shRNA (m) Lentiviral Particles: sc-60710-V.

Molecular Weight of GNA1: 23 kDa.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GNA1 (K-13): sc-47002. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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