

# GLYATL1 (C-15): sc-247022

## BACKGROUND

GLYATL1 (glycine N-acyltransferase-like protein 1), also known as GNAT or acyl-CoA:glycine N-acyltransferase-like protein 1, is a 302 amino acid mitochondrial acyltransferase that transfers the acyl group to the N-terminus of glycine. GLYATL1 can also conjugate a multitude of substrates to form a variety of N-acylglycines. A member of the glycine N-acyltransferase family, GLYATL1 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 11q12.1. Chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

## REFERENCES

1. Webster, L.T., Siddiqui, U.A., Lucas, S.V., Strong, J.M. and Mieyal, J.J. 1976. Identification of separate acyl-CoA:glycine and acyl-CoA:L-glutamine N-acyltransferase activities in mitochondrial fractions from liver of rhesus monkey and man. *J. Biol. Chem.* 251: 3352-3358.
2. Mawal, Y.R. and Qureshi, I.A. 1994. An immunodetection method for the quantitation of human acyl CoA:glycine N-acyltransferase in biological samples. *Biochem. Mol. Biol. Int.* 34: 595-601.
3. Merkle, D.J., Merkle, K.A., Stern, W. and Fleming, F.F. 1996. Fatty acid amide biosynthesis: a possible new role for peptidylglycine  $\alpha$ -amidating enzyme and acyl-coenzyme A: glycine N-acyltransferase. *Arch. Biochem. Biophys.* 330: 430-434.
4. Mawal, Y., Paradis, K. and Qureshi, I.A. 1997. Developmental profile of mitochondrial glycine N-acyltransferase in human liver. *J. Pediatr.* 130: 1003-1007.
5. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.

## CHROMOSOMAL LOCATION

Genetic locus: GLYATL1 (human) mapping to 11q12.1.

## SOURCE

GLYATL1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GLYATL1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-247022 P, (100  $\mu$ g 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

GLYATL1 (C-15) is recommended for detection of GLYATL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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); non cross-reactive with GLYAT, GLYATL2 or GLYATL3.

Suitable for use as control antibody for GLYATL1 siRNA (h): sc-96841, GLYATL1 shRNA Plasmid (h): sc-96841-SH and GLYATL1 shRNA (h) Lentiviral Particles: sc-96841-V.

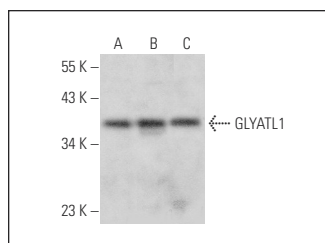
Molecular Weight of GLYATL1 isoforms 1/2: 35/39 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

## 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



GLYATL1 (C-15): sc-247022. Western blot analysis of GLYATL1 expression in Hep G2 (A), HeLa (B) and K-562 (C) whole cell lysates.

## RESEARCH USE

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

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Try **GLYATL1 (B-12): sc-515030**, our highly recommended monoclonal alternative to GLYATL1 (C-15).