SANTA CRUZ BIOTECHNOLOGY, INC.

GLYAT (D-12): sc-518264

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GLYAT (glycine-N-acyltransferase), also known as GAT, CAT, HRP-1(CLP), Acyl-CoA:glycine N-acyltransferase (AAc) or ACGNAT, is a 296 amino acid mitochondrial acyltransferase that conjugates glycine to acyl-CoA substrates. Existing as two alternatively spliced isoforms, GLYAT may participate in detoxification of endogenous and xenobiotic acyl-CoA and is expressed in human liver at peak levels from 18 months to 40 years. Children under 7 months express only five to forty percent of liver GLYAT specific activity, thereby functioning with a lower ability to detoxify their system of certain drugs and xenobiotics. A member of the glycine N-acyltransferase family, GLYAT is encoded by a gene located on human chromosome 11, which 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. SCHACHTER, D., et al. 1954. Glycine N-acylase: purification and properties. J. Biol. Chem. 208: 263-275.
2. Webster, L.T., et al. 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.
3. Mawal, Y.R., et al. 1994. Purification to homogeneity of mitochondrial acyl coa:glycine n-acyltransferase from human liver. Biochem. Biophys. Res. Commun. 205: 1373-1379.
4. Mawal, Y.R., et al. 1994. An immunodetection method for the quantitation of human acyl CoA:glycine N-acyltransferase in biological samples. Biochem. Mol. Biol. Int. 34: 595-601.
5. Merkler, D.J., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

GLYAT (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 150-177 of GLYAT of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GLYAT (D-12) is available conjugated to agarose (sc-518264 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518264 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518264 PE), fluorescein (sc-518264 FITC), Alexa Fluor® 488 (sc-518264 AF488), Alexa Fluor® 546 (sc-518264 AF546), Alexa Fluor® 594 (sc-518264 AF594) or Alexa Fluor® 647 (sc-518264 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518264 AF680) or Alexa Fluor® 790 (sc-518264 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GLYAT (D-12) is recommended for detection of GLYAT of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 GLYAT siRNA (h): sc-75149, GLYAT shRNA Plasmid (h): sc-75149-SH and GLYAT shRNA (h) Lentiviral Particles: sc-75149-V.

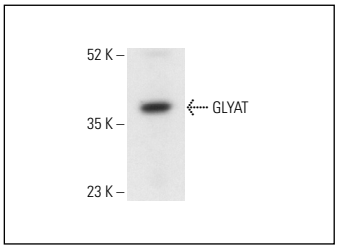
Molecular Weight of GLYAT: 30 kDa.

Positive Controls: human liver extract: sc-363766.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



GLYAT (D-12): sc-518264. Western blot analysis of GLYAT expression in human liver tissue extract. Detection reagent used: m-IgG_3 BP-HRP: sc-533670.

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.