SANTA CRUZ BIOTECHNOLOGY, INC.

# GALT (G-1): sc-365577

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

GALT (galactose-1-phosphate uridylyltransferase) is a 379 amino acid member of the galactose-1-phosphate uridylyltransferase type 1 family of proteins. GALT exists as a homodimer and is believed to play a role in galactose metabolism. More specifically, GALT is responsible for catalyzing the reaction of UDP-glucose with α-D-galactose 1-phosphate to produce α-D-glucose 1-phosphate and UDP-galactose. This is the second step of the Leloir pathway of galactose metabolism. The products of this reaction will either enter the glycolytic pathway to yield energy (α-D-glucose 1-phosphate) or be used as a galactosyl donor in the synthesis of glycoproteins and glycolipids (UDP-galactose). Mutations in the gene encoding GALT can lead to galactosemia, a disorder (occurring from the inability to metabolize galactose) that is characterized by cataracts, mental retardation and jaundice. In newborns, galactosemia can be fatal if lactose is not removed from the diet.

## REFERENCES


1. Reichardt, J.K. and Berg, P. 1988. Cloning and characterization of a cDNA encoding human galactose-1-phosphate uridyl transferase. Mol. Biol. Med. 5: 107-122.
2. Reichardt, J.K., et al. 1992. Molecular characterization of two galactosemia mutations and one polymorphism: implications for structure-function analysis of human galactose-1-phosphate uridyltransferase. Biochemistry 31: 5430-5433.
3. Ninfali, P., et al. 1996. Molecular basis of galactose-1-phosphate uridyltransferase deficiency involving skeletal muscle. J. Neurol. 243: 102-103.


## CHROMOSOMAL LOCATION

Genetic locus: GALT (human) mapping to 9p13.3.

## SOURCE

GALT (G-1) is a mouse monoclonal antibody raised against amino acids 29-328 mapping within an internal region of GALT of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GALT (G-1) is available conjugated to agarose (sc-365577 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365577 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365577 PE), fluorescein (sc-365577 FITC), Alexa Fluor® 488 (sc-365577 AF488), Alexa Fluor® 546 (sc-365577 AF546), Alexa Fluor® 594 (sc-365577 AF594) or Alexa Fluor® 647 (sc-365577 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365577 AF680) or Alexa Fluor® 790 (sc-365577 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

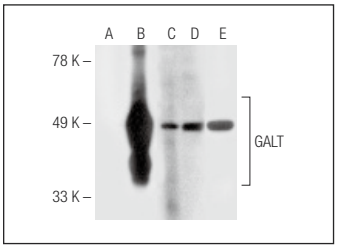
GALT (G-1) is recommended for detection of GALT of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GALT siRNA (h): sc-92612, GALT shRNA Plasmid (h): sc-92612-SH and GALT shRNA (h) Lentiviral Particles: sc-92612-V.

Molecular Weight of GALT monomer: 43 kDa.

Positive Controls: GALT (h): 293 Lysate: sc-112246, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

## DATA




GALT (G-1): sc-365577. Western blot analysis of GALT expression in non-transfected 293: sc-110760 (**A**), human GALT transfected 293: sc-112246 (**B**), K-562 (**C**) and Hep G2 (**D**) whole cell lysates and human liver tissue extract (**E**).

## SELECT PRODUCT CITATIONS


1. Coelho, A.I., et al. 2015. Arginine functionally improves clinically relevant human galactose-1-phosphate uridylyltransferase (GALT) variants expressed in a prokaryotic model. JIMD Rep. 23: 1-6.
2. Coelho, A.I., et al. 2015. Functional correction by antisense therapy of a splicing mutation in the GALT gene. Eur. J. Hum. Genet. 23: 500-506.
3. Shen, S., et al. 2021. *In situ* detection of the eIF4F translation initiation complex in mammalian cells and tissues. STAR Protoc. 2: 100621.


## 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.