

# GALT (m): 293T Lysate: sc-125372

## 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  $\alpha$ -D-galactose 1-phosphate to produce  $\alpha$ -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 ( $\alpha$ -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

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3. Ninfali, P., Bresolin, N., Dallapiccola, B. and Novelli, G. 1996. Molecular basis of galactose-1-phosphate uridylyltransferase deficiency involving skeletal muscle. *J. Neurol.* 243: 102-103.
4. Goodman, M.T., Wu, A.H., Tung, K.H., McDuffie, K., Cramer, D.W., Wilkens, L.R., Terada, K., Reichardt, J.K. and Ng, W.G. 2002. Association of galactose-1-phosphate uridylyltransferase activity and N314D genotype with the risk of ovarian cancer. *Am. J. Epidemiol.* 156: 693-701.
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6. Karas, N., Gobec, L., Pfeifer, V., Mlinar, B., Battelino, T. and Lukac-Bajalo, J. 2003. Mutations in galactose-1-phosphate uridylyltransferase gene in patients with idiopathic presenile cataract. *J. Inherit. Metab. Dis.* 26: 699-704.

## CHROMOSOMAL LOCATION

Genetic locus: Galt (mouse) mapping to 4 A5.

## PRODUCT

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

## 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.

## APPLICATIONS

GALT (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GALT antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.