

# GALT (D-13): sc-162839

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: GALT (human) mapping to 9p13.3; Galt (mouse) mapping to 4 A5.

## SOURCE

GALT (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GALT 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-162839 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

GALT (D-13) is recommended for detection of GALT of mouse, rat and 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).

GALT (D-13) is also recommended for detection of GALT in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GALT siRNA (h): sc-92612, GALT siRNA (m): sc-145321, GALT shRNA Plasmid (h): sc-92612-SH, GALT shRNA Plasmid (m): sc-145321-SH, GALT shRNA (h) Lentiviral Particles: sc-92612-V and GALT shRNA (m) Lentiviral Particles: sc-145321-V.

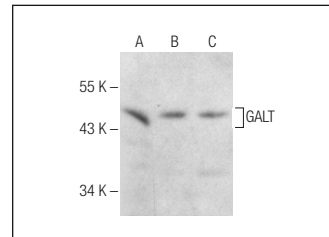
Molecular Weight of GALT monomer: 43 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MDA-MB-231 cell lysate: sc-2232 or Hep G2 cell lysate: sc-2227.

## 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



GALT (D-13): sc-162839. Western blot analysis of GALT expression in K-562 (A), Hep G2 (B) and MDA-MB-231 (C) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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Try **GALT (G-1): sc-365577**, our highly recommended monoclonal alternative to GALT (D-13).