Human UDP-galactose-4-epimerase/GALE antibody

Catalog Number: ATGA0404

PRODUCT INFORMATION

Catalog number
ATGA0404

Clone No.
AT6G10

Product type
Monoclonal Antibody

UnitProt No.
Q14376

NCBI Accession No.
NP_000394

Alternative Names
UDP-glucose 4-epimerase, Galactowaldenase, UDP-N-acetylgalactosamine 4-epimerase, UDP-GalNAc 4-epimerase, UDP-N-acetylglucosamine 4-epimerase, UDP-GlcNAc 4-epimerase, UDP-galactose 4-epimerase, short chain dehydrogenase/reductase family 1E, member 1, SDR1E1

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human GALE (1-348aa) purified from E. coli

Isotype
IgG1 kappa

Purification Note
By protein-A affinity chromatography

Application
ELISA, WB, ICC/IF

Usage
The antibody has been tested by ELISA, Western blot and ICC/IF analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

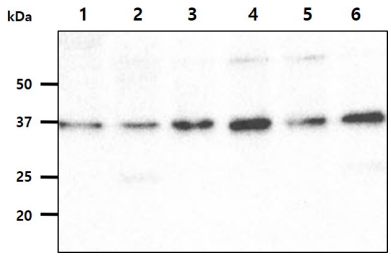
The enzyme UDP-glucose 4-epimerase, also known as UDP-galactose 4-epimerase or GALE, is a homodimeric epimerase found in bacterial, fungal, plant, and mammalian cells. This enzyme performs the final step in the Leloir pathway of galactose metabolism, catalyzing the reversible conversion of UDP-galactose to UDP-glucose. GALE tightly binds nicotinamide adenine dinucleotide (NAD+), a co-factor required for catalytic activity. Additionally, human and some bacterial GALE isoforms reversibly catalyze the formation of UDP-N-acetylgalactosamine (UDP-GalNAc) from UDP-N-acetylglucosamine (UDP-GlcNAc) in the presence of NAD+, an initial step in glycoprotein or glycolipid synthesis.

General References

Holden HM., et al. (2003) J. Biol. Chem. 278(45): 43885-8.
Liu Y., et al. (1996) Biochemistry. 35(23): 7615-20.
Thoden Jb., et al. (2001) J. Biol. Chem. 276(18): 15131-6.

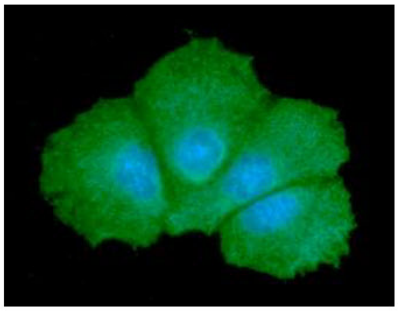
DATA

Western blot analysis (WB)



The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human GALE antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1. : MCF7 cell lysate
Lane 2. : Jurkat cell lysate
Lane 3. : A431 cell lysate
Lane 4. : A549 cell lysate
Lane 5. : HeLa cell lysate
Lane 6. : HepG2 cell lysate

Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of GALE in Hep3B cells. The cell was stained with ATGA0404 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).