SANTA CRUZ BIOTECHNOLOGY, INC.

GALE (D-11): sc-390460

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GALE, also known as galactowaldenase, UDP-galactose-4-epimerase or SDR1E1, is a 348 amino acid protein that functions as the third enzyme in the Leloir pathway of galactose metabolism. A member of the sugar epimerase family, GALE exists as a homodimer, binds FAD as a cofactor and catalyzes the epimerization of UDP-N-acetylglucosamine to UDP-N-acetylgalactosamine and UDP-glucose to UDP-galactose. The gene encoding GALE maps to human chromosome 1p36.11 and mutations in this gene lead to the development of complex disorder known as epimerase-deficiency galactosemia (EDG) or galactosemia type 3, which is characterized by mental retardation, liver damage, cataracts and deafness.

REFERENCES

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6. Maceratesi, P., et al. 1998. Human UDP-galactose 4' epimerase (GALE) gene and identification of five missense mutations in patients with epimerase-deficiency galactosemia. Mol. Genet. Metab. 63: 26-30.
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8. Thoden, J.B., et al. 2001. Human UDP-galactose 4-epimerase. Accommodation of UDP-N-acetylglucosamine within the active site. J. Biol. Chem. 276: 15131-15136.
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CHROMOSOMAL LOCATION

Genetic locus: GALE (human) mapping to 1p36.11; Gale (mouse) mapping to 4 D3.

SOURCE

GALE (D-11) is a mouse monoclonal antibody raised against amino acids 181-345 mapping near the N-terminus of GALE of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GALE (D-11) is recommended for detection of GALE of mouse, rat and 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 GALE siRNA (h): sc-78950, GALE siRNA (m): sc-145310, GALE shRNA Plasmid (h): sc-78950-SH, GALE shRNA Plasmid (m): sc-145310-SH, GALE shRNA (h) Lentiviral Particles: sc-78950-V and GALE shRNA (m) Lentiviral Particles: sc-145310-V.

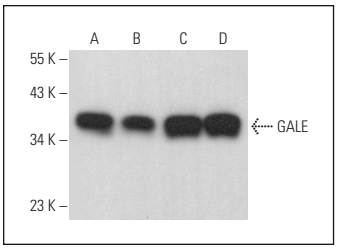
Molecular Weight of GALE: 38 kDa.

Positive Controls: GALE (h4): 293T Lysate: sc-170673, COLO 205 whole cell lysate: sc-364177 or Caki-1 cell lysate: sc-2224.

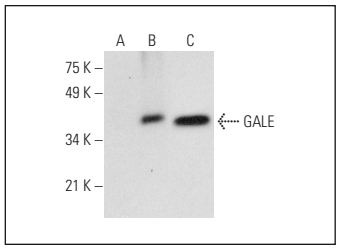
RECOMMENDED SUPPORT REAGENTS

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



GALE (D-11): sc-390460. Western blot analysis of GALE expression in Caki-1 (**A**), A2058 (**B**), COLO 205 (**C**) and HeLa (**D**) whole cell lysates.



GALE (D-11): sc-390460 . Western blot analysis of expression in non-transfected 293T: sc-117752 (**A**), human GALE transfected 293T: sc-170673 (**B**) and Caki-1 (**C**) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.