SANTA CRUZ BIOTECHNOLOGY, INC.

GLYCTK (Q-23): sc-133628

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The Power to Question

BACKGROUND

GLYCTK (glycerate kinase), also known as HBEBP4 (HBeAg-binding protein 4), LP5910 or HBEBP2, is a 523 amino acid protein that is expressed as seven isoforms which are present throughout the body. Localized to the cytoplasm and the mitochondrion in an isoform-specific manner, GLYCTK functions to catalyze the ATP-dependent conversion of (R)-glycerate to 3-phospho-(R)-glycerate, thereby playing an important role in neural and skeletal muscle systems. Defects in the gene encoding GLYCTK are the cause of D-glyceric acidemia, an inborn error of amino acid metabolism that is best described as nonketotic hyperglycinemia and is characterized by the excretion of D-glyceric acid in the urine.

REFERENCES

1. Kolvraa, S., Rasmussen, K. and Brandt, N.J. 1976. D-glyceric acidemia: biohcemical studies of a new syndrome. Pediatr. Res. 10: 825-830.
2. Duran, M., Beemer, F.A., Bruinvis, L., Ketting, D. and Wadman, S.K. 1987. D-glyceric acidemia: an inborn error associated with fructose metabolism. Pediatr. Res. 21: 502-506.
3. Van Schaftingen, E. 1989. D-glycerate kinase deficiency as a cause of D-glyceric aciduria. FEBS Lett. 243: 127-131.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610516. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Guo, J.H., Hexige, S., Chen, L., Zhou, G.J., Wang, X., Jiang, J.M., Kong, Y.H., Ji, G.Q., Wu, C.Q., Zhao, S.Y. and Yu, L. 2006. Isolation and characterization of the human D-glyceric acidemia related glycerate kinase gene GLYCTK1 and its alternatively splicing variant GLYCTK2. DNA Seq. 17: 1-7.

CHROMOSOMAL LOCATION

Genetic locus: GLYCTK (human) mapping to 3p21.1; Glyctk (mouse) mapping to 9 F1.

SOURCE

GLYCTK (Q-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic GLYCTK peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

GLYCTK (Q-23) is recommended for detection of GLYCTK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GLYCTK siRNA (h): sc-78029, GLYCTK siRNA (m): sc-145456, GLYCTK shRNA Plasmid (h): sc-78029-SH, GLYCTK shRNA Plasmid (m): sc-145456-SH, GLYCTK shRNA (h) Lentiviral Particles: sc-78029-V and GLYCTK shRNA (m) Lentiviral Particles: sc-145456-V.

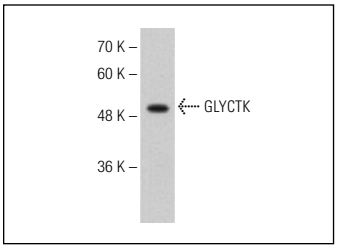
Molecular Weight of GLYCTK: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



GLYCTK (Q-23): sc-133628. Western blot analysis of GLYCTK expression in Hep G2 whole cell lysate.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **GLYCTK (N6): sc-130483**, our highly recommended monoclonal alternative to GLYCTK (Q-23).