SANTA CRUZ BIOTECHNOLOGY, INC.

GLYCTK (N6): sc-130483

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 7 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 (N6) is a mouse monoclonal antibody raised against recombinant GLYCTK of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

GLYCTK (N6) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

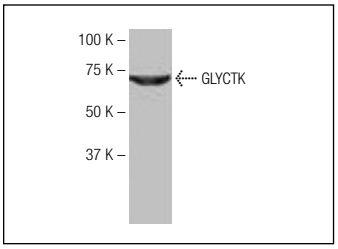
Molecular Weight of GLYCTK: 55 kDa.

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

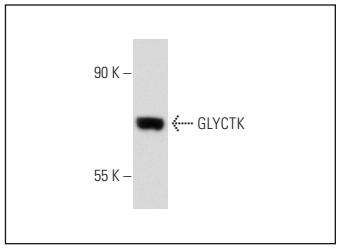
RECOMMENDED SUPPORT REAGENTS

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, 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 (N6): sc-130483. Western blot analysis of GLYCTK expression in NIH/3T3 whole cell lysate.



GLYCTK (N6): sc-130483. Western blot analysis of GLYCTK expression in Hep G2 whole cell lysate.

RESEARCH USE

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