SANTA CRUZ BIOTECHNOLOGY, INC.

TIM (N-21): sc-22031

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glycolysis is an evolutionarily conserved series of 10 chemical reactions that utilizes 11 enzymes to concomitantly generate pyruvate and ATP from glucose. Triosephosphate isomerase, known as TIM or TPI, is ubiquitously expressed and catalyzes the interconversion of dihydroxyacetone phosphate (DHAP) and glyceraldehyde-3-phosphate in the glycolitic pathway. The human TIM gene spans 3.5 kilobase pairs, contains 7 exons and encodes a 249 amino acid protein. The TIM promoter element contains a TATA box (positions -27 to -21) and multiple GC boxes (positions -126 to -48) that variably conform to the consensus Sp1-binding site. The GC boxes function in *cis* to the TATA box to control both the frequency and position of transcription initiation. Deficiencies in TIM result in a rare autosomal recessive condition where a metabolic block in glycolysis and accumulating DHAP in erythrocytes can lead to non-spherocytic hemolytic anemia, recurrent infections, cardiomyopathy and neuromuscular dysfunctions.

CHROMOSOMAL LOCATION

Genetic locus: TPI1 (human) mapping to 12p13.31; Tpi1 (mouse) mapping to 6 F2.

SOURCE

TIM (N-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TIM of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22031 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TIM (N-21) is recommended for detection of TIM 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)], 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).

TIM (N-21) is also recommended for detection of TIM in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TIM siRNA (h): sc-37172, TIM siRNA (m): sc-37173, TIM shRNA Plasmid (h): sc-37172-SH, TIM shRNA Plasmid (m): sc-37173-SH, TIM shRNA (h) Lentiviral Particles: sc-37172-V and TIM shRNA (m) Lentiviral Particles: sc-37173-V.

Molecular Weight of TIM: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ES-2 cell lysate: sc-24674 or K-562 whole cell lysate: sc-2203.

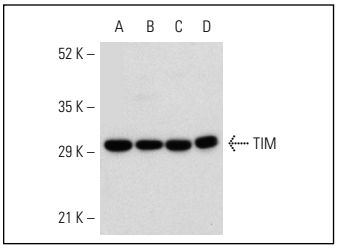
RESEARCH USE

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

STORAGE

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

DATA



TIM (N-21): sc-22031. Western blot analysis of TIM expression in HeLa (**A**), ES-2 (**B**) LADMAC (**C**) and K-562 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Katayama, M., et al. 2006. Protein pattern difference in the colon cancer cell lines examined by two-dimensional differential in-gel electrophoresis and mass spectrometry. Surg. Today 36: 1085-1093.
2. Shao, W., et al. 2007. The caspase-1 digestome identifies the glycolysis pathway as a target during infection and septic shock. J. Biol. Chem. 282: 36321-36329.
3. Weinkauf, M., et al. 2009. 2-D PAGE-based comparison of Proteasome Inhibitor bortezomib in sensitive and resistant mantle cell lymphoma. Electrophoresis 30: 974-986.
4. Jensen, H., et al. 2009. Cell-surface expression of HSP 70 on hematopoietic cancer cells after inhibition of HDAC activity. J. Leukoc. Biol. 86: 923-932.
5. Zhai, J., et al. 2009. Proteomic characterization of lipid raft proteins in amyotrophic lateral sclerosis mouse spinal cord. FEBS J. 276: 3308-3323.
6. Zhang, X.Z., et al. 2009. Triosephosphate isomerase and peroxiredoxin 6, two novel serum markers for human lung squamous cell carcinoma. Cancer Sci. 100: 2396-2401.
7. Grunert, T., et al. 2011. A comparative proteome analysis links tyrosine kinase 2 (Tyk2) to the regulation of cellular glucose and lipid metabolism in response to poly(I:C). J. Proteomics 74: 2866-2880.

PROTOCOLS

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