

GPD1 (h): 293T Lysate: sc-114223

BACKGROUND

Voltage-gated sodium channels drive the initial depolarization phase of the cardiac action potential, therefore, critically determine conduction of excitation through the heart. As a member of the NAD-dependent glycerol-3-phosphate dehydrogenase family, glycerol-3-phosphate dehydrogenase 1 (GPD1) is a 349 amino acid cytoplasmic protein that catalyzes the formation of glycerone phosphate and NADH from sn-glycerol 3-phosphate and NAD⁺. Inhibited by zinc ions and sulfate, GPD1 exists as a homodimer and may have similar functions as GPD1L (glycerol-3 phosphate dehydrogenase-1 like). GPD1L is thought to affect trafficking of the cardiac sodium current to the cell surface and mutations in the gene encoding GPD1L are thought to be involved in sudden infant death syndrome (SIDS).

REFERENCES

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3. Lin, H., Nguyen, P. and Vancura, A. 2002. Phospholipase C interacts with Sgd1p and is required for expression of GPD1 and osmoresistance in *Saccharomyces cerevisiae*. *Mol. Genet. Genomics* 267: 313-320.
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6. Van Norstrand, D.W., Valdivia, C.R., Tester, D.J., Ueda, K., London, B., Makielski, J.C. and Ackerman, M.J. 2007. Molecular and functional characterization of novel glycerol-3-phosphate dehydrogenase 1 like gene (GPD1-L) mutations in sudden infant death syndrome. *Circulation* 116: 2253-2259.
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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: GPD1 (human) mapping to 12q13.12.

PRODUCT

GPD1 (h): 293T Lysate represents a lysate of human GPD1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GPD1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GPD1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

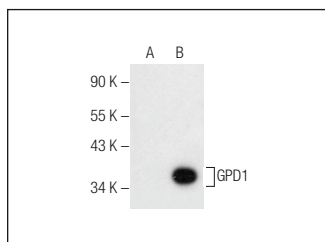
GPD1 (E-7): sc-376219 is recommended as a positive control antibody for Western Blot analysis of enhanced human GPD1 expression in GPD1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

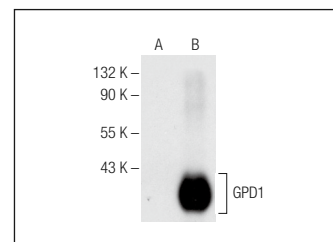
To ensure optimal results, the following support reagents are recommended:

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.

DATA



GPD1 (E-7): sc-376219. Western blot analysis of GPD1 expression in non-transfected: sc-117752 (A) and human GPD1 transfected: sc-114223 (B) 293T whole cell lysates.



GPD1 (G-9): sc-390379. Western blot analysis of GPD1 expression in non-transfected: sc-117752 (A) and human GPD1 transfected: sc-114223 (B) 293T whole cell lysates.

RESEARCH USE

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