SANTA CRUZ BIOTECHNOLOGY, INC.

PGM 1 (D-8): sc-373796

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphoglucomutase, which belongs to the phophohexose mutase family, plays a role in glycogen catabolism (glycogenolysis) as well as in the process of glycogen synthesis (glycogenesis). During glycogenolysis, PGM converts glucose-1-phosphate to glucose-6-phosphate, thus promoting glycolysis and the pentose phosphate pathway. During glycogenesis, PGM functions in the opposite manner, converting glucose-6-phosphate into glucose-1-phosphate, to facilitate glycogen synthesis. PGM has three structural loci: PGM1, PGM2 and PGM3. These three genetic forms of PGM differ in amino acid sequences but catalyze the same reactions, therefore indicating that they are isozymes. PGM1, a 562 amino acid protein, is highly polymorphic; three mutations and four intragenic recombination events between the three mutation sites generate eight protein variants. All phosphoglucomutases act as monomers and bind one magnesium ion per subunit.

CHROMOSOMAL LOCATION

Genetic locus: PGM1 (human) mapping to 1p31.3; Pgm1 (mouse) mapping to 5 C3.1.

SOURCE

PGM 1 (D-8) is a mouse monoclonal antibody raised against amino acids 407-514 mapping near the C-terminus of PGM 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PGM 1 (D-8) is available conjugated to agarose (sc-373796 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-373796 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373796 PE), fluorescein (sc-373796 FITC), Alexa Fluor® 488 (sc-373796 AF488), Alexa Fluor® 546 (sc-373796 AF546), Alexa Fluor® 594 (sc-373796 AF594) or Alexa Fluor® 647 (sc-373796 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373796 AF680) or Alexa Fluor® 790 (sc-373796 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PGM 1 (D-8) is recommended for detection of PGM 1 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 PGM 1 siRNA (h): sc-61332, PGM 1 siRNA (m): sc-61333, PGM 1 shRNA Plasmid (h): sc-61332-SH, PGM 1 shRNA Plasmid (m): sc-61333-SH, PGM 1 shRNA (h) Lentiviral Particles: sc-61332-V and PGM 1 shRNA (m) Lentiviral Particles: sc-61333-V.

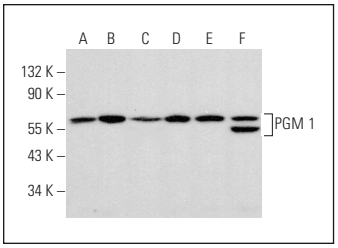
Molecular Weight of PGM 1: 61 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, HeLa whole cell lysate: sc-2200 or PGM 1 (h): 293T Lysate: sc-114029.

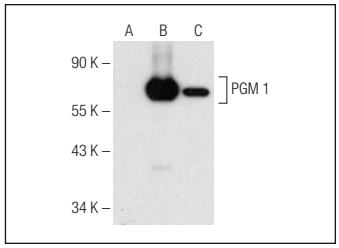
RECOMMENDED SUPPORT REAGENTS

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



PGM 1 (D-8): sc-373796. Western blot analysis of PGM 1 expression in c4 (**A**), NIH/3T3 (**B**), A-10 (**C**), L6 (**D**), Sol8 (**E**) and BW5147 (**F**) whole cell lysates.



PGM 1 (D-8): sc-373796. Western blot analysis of PGM 1 expression in non-transfected 293T: sc-117752 (**A**), human PGM 1 transfected 293T: sc-114029 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Curtis, M., et al. 2019. Fibroblasts mobilize tumor cell glycogen to promote proliferation and metastasis. Cell Metab. 29: 141-155.e9.
2. Zhou, W.J., et al. 2022. Fructose-1,6-bisphosphate prevents pregnancy loss by inducing decidual COX-2+ macrophage differentiation. Sci. Adv. 8: eabj2488.
3. Li, X., et al. 2022. Glycometabolism change during *Burkholderia pseudomallei* infection in RAW264.7 cells by proteomic analysis. Sci. Rep. 12: 12560.
4. Weber, C.M., et al. 2022. Induced pluripotent stem cell-derived cells model brain microvascular endothelial cell glucose metabolism. Fluids Barriers CNS 19: 98.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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