

PGM 1 (T-16): sc-50659

BACKGROUND

Phosphoglucomutase, which belongs to the phosphohexose 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. PGM 1, a 562 amino acid protein, is highly polymorphic; 3 mutations and 4 intragenic recombination events between the 3 mutation sites generates 8 protein variants. All phosphoglucomutases act as monomers and bind one magnesium ion per subunit.

REFERENCES

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CHROMOSOMAL LOCATION

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

SOURCE

PGM 1 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PGM 1 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-50659 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PGM 1 (T-16) is recommended for detection of PGM 1 (Phosphoglucomutase-1) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PGM 1 (T-16) is also recommended for detection of PGM 1 (Phosphoglucomutase-1) in additional species, including equine, canine, bovine, porcine and avian.

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: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.