

PGLS (K-13): sc-243780

BACKGROUND

PGLS (6-phosphogluconolactonase), also known as 6PGL, is a 258 amino acid protein that belongs to the glucosamine/galactosamine-6-phosphate isomerase family and the 6-phosphogluconolactonase subfamily. Localizing to cytoplasm, PGLS is a particularly active enzyme that catalyzes the hydrolysis of 6-phosphogluconolactone to 6-phosphogluconate, which is the second step of the pentose phosphate pathway. Highly conserved, PGLS shares 33% to 37% sequence similarity with yeast Sol1, Sol2, Sol3 and Sol4, 26% similarity with the C-terminal portion of human H6PD, 20% to 25% similarity with bacterial devB proteins and 17% similarity with human GNPDA1. PGLS erythrocyte deficiency, an autosomal dominant disorder, in conjunction with G6PD deficiency, may play a role in hemolytic anemia. The gene that encodes PGLS maps to human chromosome 19p13.11.

REFERENCES

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4. Collard, F., et al. 1999. Identification of the cDNA encoding human 6-phosphogluconolactonase, the enzyme catalyzing the second step of the pentose phosphate pathway(1). *FEBS Lett.* 459: 223-226.
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6. Fratelli, M., et al. 2002. Identification by redox proteomics of glutathionylated proteins in oxidatively stressed human T lymphocytes. *Proc. Natl. Acad. Sci. USA* 99: 3505-3510.
7. Celis, J.E., et al. 2005. Identification of extracellular and intracellular signaling components of the mammary adipose tissue and its interstitial fluid in high risk breast cancer patients: toward dissecting the molecular circuitry of epithelial-adipocyte stromal cell interactions. *Mol. Cell Proteomics* 4: 492-522.

CHROMOSOMAL LOCATION

Genetic locus: PGLS (human) mapping to 19p13.11.

SOURCE

PGLS (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PGLS of human origin.

STORAGE

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

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-243780 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PGLS (K-13) is recommended for detection of PGLS of 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).

Suitable for use as control antibody for PGLS siRNA (h): sc-97435, PGLS shRNA Plasmid (h): sc-97435-SH and PGLS shRNA (h) Lentiviral Particles: sc-97435-V.

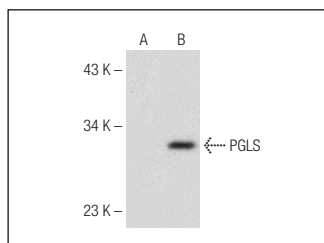
Molecular Weight of PGLS: 28 kDa.

Positive Controls: PGLS (h): 293T Lysate: sc-159885.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PGLS (K-13): sc-243780. Western blot analysis of PGLS expression in non-transfected: sc-117752 (A) and human PGLS transfected: sc-159885 (B) 293T whole cell lysates.

RESEARCH USE

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