

# G6PD (H-160): sc-67165

## BACKGROUND

Glucose-6-phosphate 1-dehydrogenase (G6PD) plays an important role in the pentose phosphate pathway. It is a member of the glucose-6-phosphate dehydrogenase family of proteins. G6PD is an ubiquitous enzyme that produces pentose sugars for nucleic acid synthesis, but is also involved in carbohydrate degradation, as it is one of the main producers of NADPH reducing power. G6PD has NADP as a cofactor and structural element. It can be found as a homodimer or homotetramer and is primarily detected in lymphoblasts, granulocytes and sperm. Defects in G6PD can cause chronic non-spherocytic hemolytic anemia (CNSHA), especially in areas in which malaria is an epidemic. Individuals with a high level of G6PD-deficiency are at higher risk of acute hemolytic attacks.

## REFERENCES

- Martini, G., et al. 1986. Structural analysis of the X-linked gene encoding human glucose-6-phosphate dehydrogenase. *EMBO J.* 5: 1849-1855.
- Persico, M.G., et al. 1986. Isolation of human glucose-6-phosphate dehydrogenase (G6PD) cDNA clones: primary structure of the protein and unusual 5' non-coding region. *Nucleic Acids Res.* 14: 2511-2522.

## CHROMOSOMAL LOCATION

Genetic locus: G6PD (human) mapping to Xq28; G6pdx (mouse) mapping to X A7.3.

## SOURCE

G6PD (H-160) is a rabbit polyclonal antibody raised against amino acids 356-515 mapping at the C-terminus of G6PD 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.

## APPLICATIONS

G6PD (H-160) is recommended for detection of G6PD 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

G6PD (H-160) is also recommended for detection of G6PD in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for G6PD siRNA (h): sc-60667, G6PD siRNA (m): sc-60668, G6PD shRNA Plasmid (h): sc-60667-SH, G6PD shRNA Plasmid (m): sc-60668-SH, G6PD shRNA (h) Lentiviral Particles: sc-60667-V and G6PD shRNA (m) Lentiviral Particles: sc-60668-V.

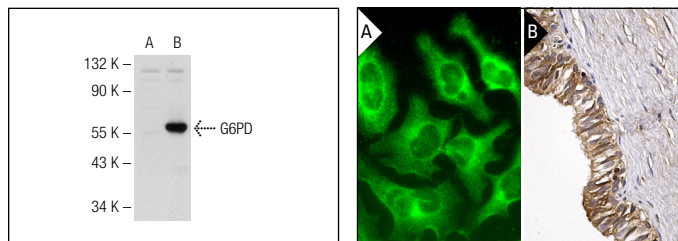
Molecular Weight of G6PD: 58 kDa.

Positive Controls: G6PD (h2): 293T Lysate: sc-173874 or HeLa whole cell lysate: sc-2200.

## STORAGE

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

## DATA



G6PD (H-160): sc-67165. Western blot analysis of G6PD expression in non-transfected: sc-117752 (A) and human G6PD transfected: sc-173874 (B) 293T whole cell lysates.

G6PD (H-160): sc-67165. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts (B).

## SELECT PRODUCT CITATIONS

- Hui, L., et al. 2010. HGF suppresses high glucose-mediated oxidative stress in mesangial cells by activation of PKG and inhibition of PKA. *Free Radic. Biol. Med.* 49: 467-473.
- Hollander, M.C., et al. 2011. A Cyp2a polymorphism predicts susceptibility to NNK-induced lung tumorigenesis in mice. *Carcinogenesis* 32: 1279-1284.
- Khan, R., et al. 2013. Live-cell imaging of the association of STAT6-GFP with mitochondria. *PLoS ONE* 8: e55426.
- Prusty, B.K., et al. 2014. GP96 interacts with HHV-6 during viral entry and directs it for cellular degradation. *PLoS ONE* 9: e113962.
- Siegl, C., et al. 2014. Tumor suppressor p53 alters host cell metabolism to limit *Chlamydia trachomatis* infection. *Cell Rep.* 9: 918-929.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **G6PD (G-12): sc-373886** or **G6PD (G-6): sc-373887**, our highly recommended monoclonal alternatives to G6PD (H-160).