

**H6PD Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP5039b****Specification**

---

**H6PD Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [O95479](#)**H6PD Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 9563**Other Names**

GDH/6PGL endoplasmic bifunctional protein, Glucose 1-dehydrogenase, Hexose-6-phosphate dehydrogenase, 6-phosphogluconolactonase, 6PGL, H6PD, GDH

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**H6PD Antibody (C-term) Blocking Peptide - Protein Information****Name** H6PD ([HGNC:4795](#))**Synonyms** GDH**Function**

Bifunctional enzyme localized in the lumen of the endoplasmic reticulum that catalyzes the first two steps of the oxidative branch of the pentose phosphate pathway/shunt, an alternative to glycolysis and a major source of reducing power and metabolic intermediates for biosynthetic processes (By similarity). Has a hexose-6-phosphate dehydrogenase activity, with broad substrate specificity compared to glucose-6-phosphate 1-dehydrogenase/G6PD, and catalyzes the first step of the pentose phosphate pathway (PubMed:<a href="http://www.uniprot.org/citations/12858176" target="\_blank">12858176</a>, PubMed:<a href="http://www.uniprot.org/citations/18628520" target="\_blank">18628520</a>, PubMed:<a href="http://www.uniprot.org/citations/23132696" target="\_blank">23132696</a>). In addition, acts as a 6-phosphogluconolactonase and catalyzes the second step of the pentose phosphate pathway (By similarity). May have a dehydrogenase activity for alternative substrates including glucosamine 6-phosphate and glucose 6-sulfate (By similarity). The main function of this enzyme is to provide reducing equivalents such as NADPH to maintain the adequate levels of reductive cofactors in the oxidizing environment of the endoplasmic reticulum (PubMed:<a href="http://www.uniprot.org/citations/12858176" target="\_blank">12858176</a>, PubMed:<a href="http://www.uniprot.org/citations/18628520"

target="\_blank">18628520</a>, PubMed:<a href="http://www.uniprot.org/citations/23132696" target="\_blank">23132696</a>). By producing NADPH that is needed by reductases of the lumen of the endoplasmic reticulum like corticosteroid 11-beta-dehydrogenase isozyme 1/HSD11B1, indirectly regulates their activity (PubMed:<a href="http://www.uniprot.org/citations/18628520" target="\_blank">18628520</a>).

**Cellular Location**

Endoplasmic reticulum lumen

**Tissue Location**

Present in most tissues examined, strongest in liver.

**H6PD Antibody (C-term) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**H6PD Antibody (C-term) Blocking Peptide - Images****H6PD Antibody (C-term) Blocking Peptide - Background**

H6PD is 2 forms of glucose-6-phosphate dehydrogenase. G form is X-linked and H form, encoded by this gene, is autosomally linked. This H form shows activity with other hexose-6-phosphates, especially galactose-6-phosphate, whereas the G form is specific for glucose-6-phosphate. Both forms are present in most tissues, but H form is not found in red cells.

**H6PD Antibody (C-term) Blocking Peptide - References**

Balazs, Z., et al. Mol. Cell. Endocrinol. 301 (1-2), 117-122 (2009) Zhang, Y.L., et al. Arch. Biochem. Biophys. 483(1):45-54(2009)Uckaya, G., et al. Diabetes Res. Clin. Pract. 82 SUPPL 2, S135-S140 (2008)