

**H6PD Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP5039b****Specification**

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**H6PD Antibody (C-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">O95479</a>
Other Accession	<a href="#">Q8CFX1</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	743-769

**H6PD Antibody (C-term) - Additional Information****Gene ID** 9563**Other Names**

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

**Target/Specificity**

This H6PD antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 743-769 amino acids from the C-terminal region of human H6PD.

**Dilution**

WB~~1:1000

IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

H6PD Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**H6PD Antibody (C-term) - 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:[12858176](#), PubMed:[18628520](#), PubMed:[23132696](#)). 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:[12858176](#), PubMed:[18628520](#), PubMed:[23132696](#)). 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:[18628520](#)).

#### Cellular Location

Endoplasmic reticulum lumen

#### Tissue Location

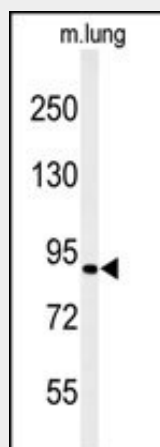
Present in most tissues examined, strongest in liver.

### H6PD Antibody (C-term) - Protocols

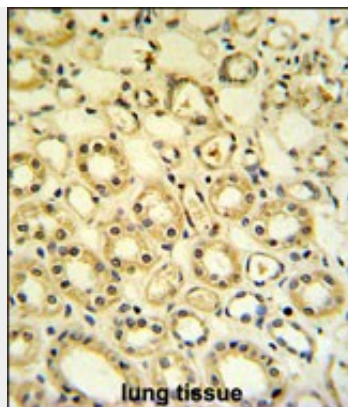
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### H6PD Antibody (C-term) - Images



Western blot analysis of H6PD Antibody (C-term) (Cat. #AP5039b) in mouse lung tissue lysates (35ug/lane). H6PD (arrow) was detected using the purified Pab.



H6PD Antibody (C-term) (Cat. #AP5039b) IHC analysis in formalin fixed and paraffin embedded lung tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the H6PD Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

#### **H6PD Antibody (C-term) - 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) - 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)

#### **H6PD Antibody (C-term) - Citations**

- [Sexually dimorphic effects of maternal nutrient reduction on expression of genes regulating cortisol metabolism in fetal baboon adipose and liver tissues.](#)