



# Human Glucose 6 Phosphate Dehydrogenase Protein (DAG369)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

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| <b>Product Overview</b>    | Glucose-6-phosphate1-dehydrogenase (G-6-PDH) (Leuconostoc mesenteroides), Recombinant, Molecularweights: 55kDa (SDS-PAGE), 146kDa (gel filtration), was expressed in E. coli.Does not contain a fusion partner.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Antigen Description</b> | Glucose-6-phosphate dehydrogenase(G6PD or G6PDH) is a cytosolic enzyme in the pentose phosphate pathway (seeimage), a metabolic pathway that supplies reducing energy to cells (such aserythrocytes) by maintaining the level of the co-enzyme nicotinamide adeninedinucleotide phosphate (NADPH). The NADPH in turn maintains the level ofglutathione in these cells that helps protect the red blood cells againstoxidative damage. Of greater quantitative importance is the production ofNADPH for tissues actively engaged in biosynthesis of fatty acids and/orisoprenoids, such as the liver, mammary glands, adipose tissue, and theadrenal glands. |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Conjugate</b>           | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Applications</b>        | Specificmethodologies have not been tested using this product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Format</b>              | Purified, Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>       | Specific activity:Lot specific IU/mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Buffer</b>              | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Preservative</b>        | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>             | 2-8°C short term, -20°C long term                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## BACKGROUND

**Introduction**

This gene encodes glucose-6-phosphate dehydrogenase. This protein is a cytosolic enzyme encoded by a housekeeping X-linked gene whose main function is to produce NADPH, a key electron donor in the defense against oxidizing agents and in reductive biosynthetic reactions. G6PD is remarkable for its genetic diversity. Many variants of G6PD, mostly produced from missense mutations, have been described with wide ranging levels of enzyme activity and associated clinical symptoms. G6PD deficiency may cause neonatal jaundice, acute hemolysis, or severe chronic non-spherocytic hemolytic anemia. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

**Keywords**

G6PD; glucose-6-phosphate dehydrogenase; G6PD1; glucose-6-phosphate 1-dehydrogenase;