

## Active Recombinant Human H6PD Protein, His-tagged

**Cat. No.** H6PD-9832H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human H6PD Protein (Ala2-Leu515) with C-terminal 6x His tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>    | 2-515 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | <p>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.</p> |
| <b>Bio-activity</b>     | Measured by its ability to dehydrogenate glucose-6-phosphate. The specific activity is >14,000 pmol/min/μg, as measured under the described conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Molecular Mass</b>   | 60 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Endotoxin</b>        | < 1 EU/μg of the protein by the LAL method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|                       |                                                                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>         | > 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.                                                                                                                      |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles.<br>6 months from date of receipt, -20 to -70 centigrade as supplied.<br>3 months, -20 to -70 centigrade under sterile conditions after opening. |
| <b>Storage Buffer</b> | Supplied as a 0.2 µm filtered solution in Tris, NADP and Glycerol.                                                                                                                                                  |
| <b>Shipping</b>       | The product is shipped with polar packs.                                                                                                                                                                            |

## GENE INFORMATION

|                        |                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | G6PD glucose-6-phosphate dehydrogenase [ Homo sapiens (human) ]                                                                              |
| <b>Official Symbol</b> | G6PD                                                                                                                                         |
| <b>Synonyms</b>        | G6PD; glucose-6-phosphate dehydrogenase; G6PD1; glucose-6-phosphate 1-dehydrogenase; epididymis secretory sperm binding protein; EC 1.1.1.49 |
| <b>Gene ID</b>         | 2539                                                                                                                                         |
| <b>mRNA Refseq</b>     | NM_000402                                                                                                                                    |
| <b>Protein Refseq</b>  | NP_000393                                                                                                                                    |
| <b>MIM</b>             | 305900                                                                                                                                       |
| <b>UniProt ID</b>      | P11413                                                                                                                                       |

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