

## Glucose-6-phosphate Dehydrogenase from *E. coli*, Recombinant

Cat. No. DIA-407

Lot. No. (See product label)

### Introduction

**Description** Glucose-6-phosphate dehydrogenase (G6PD or G6PDH) (EC 1.1.1.49) is a cytosolic enzyme that catalyzes the chemical reaction: D-glucose 6-phosphate + NADP<sup>+</sup> ↔ 6-phospho-D-glucono-1,5-lactone + NADPH + H<sup>+</sup>. This enzyme is in the pentose phosphate pathway, a metabolic pathway that supplies reducing energy to cells (such as erythrocytes) by maintaining the level of the co-enzyme nicotinamide adenine dinucleotide phosphate (NADPH).

**Synonyms** EC 1.1.1.49; NADP-glucose-6-phosphate dehydrogenase; Zwischenferment; D-glucose 6-phosphate dehydrogenase; glucose 6-phosphate dehydrogenase (NADP); NADP-dependent glucose 6-phosphate dehydrogenase; 6-phosphoglucose dehydrogenase; Entner-Doudoroff enzyme; glucose-6-phosphate 1-dehydrogenase; G6PDH; GPD; glucose-6-phosphate dehydrogenase; 9001-40-5

### Product Information

<b>Species</b>	E. coli
<b>Source</b>	E. coli
<b>Form</b>	In 3.2 M ammonium sulphate.
<b>EC Number</b>	EC 1.1.1.49
<b>CAS No.</b>	9001-40-5
<b>Molecular Weight</b>	~ 56,770
<b>Activity</b>	172 U/mg
<b>Concentration</b>	~ 1,250 U/ml
<b>Isoelectric point</b>	~ 5.8
<b>Optimum pH</b>	7.6
<b>Optimum temperature</b>	25°C
<b>Unit Definition</b>	One Unit of glucose 6-phosphate dehydrogenase (G6PDH) is defined as the amount of enzyme required to produce one μmole of NADPH from NADP <sup>+</sup> per minute.

### Usage and Packaging

**Preparation Instructions** For assay, this enzyme should be diluted in 200 mM Imidazole buffer, pH 7.6 containing 1 mg/mL BSA. Swirl to mix the enzyme suspension immediately prior to use.

### Storage and Shipping Information

<b>Storage</b>	4°C
<b>Stability</b>	> 2 years

