

## Native *Leuconostoc mesenteroides* Glucose-6-phosphate Dehydrogenase

Cat. No. DIA-321

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).

#### Applications

Glucose-6-phosphate dehydrogenase was used as a model to test the effect of seed protein fractions on enzyme protection during dehydration. G-6-PDH has been utilized in assays for nicotinamide adenine dinucleotide and tissue pyridine nucleotides.

#### 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

#### Source

*Leuconostoc mesenteroides*

#### Form

ammonium sulfate suspension; Suspension in 2.7 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> solution containing 42 mM Tris and 0.8 mM MgCl<sub>2</sub>

#### EC Number

EC 1.1.1.49

#### CAS No.

9001-40-5

#### Activity

> 2.0 mg/mL Biuret

#### Concentration

> 2.0 mg/mL Biuret

#### Unit Definition

One unit will oxidize 1.0 μmole of D-glucose 6-phosphate to 6-phospho-D-gluconate per min in the presence of NAD at pH 7.8 at 30°C.

### Storage and Shipping Information

#### Storage

2-8°C