Creative Enzymes®

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+ ↔ 6-phospho-D-glucono-1,5-lactone + NADPH + H+. 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

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

Storage	4°C
Stability	> 2 years