Creative Enzymes®

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+ ↔ 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).
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 (NH4)2SO4 solution containing 42 mM Tris and 0.8 mM MgCl2
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