

Hexokinase and Glucose-6-Phosphate Dehydrogenase Enzyme Mixture

Product Information

Cat#	DIA-548
Source	Hexokinase: Recombinant from yeast G6P-DH: Recombinant from <i>Leuconostoc mesenteroides</i>
Description	High purity hexokinase (yeast) and glucose-6-phosphate dehydrogenase (G6P-DH) (<i>Leuconostoc mesenteroides</i>) mixture for use in research, biochemical enzyme assays and in vitro diagnostic analysis.
Form	Suspension
ECNumber	Hexokinase: 2.7.1.1 G6P-DH: 1.1.1.49
CAS No.	Hexokinase: 9001-51-8 G6P-DH: 9001-40-5
Optimum pH	7.4
Optimum temperature	40 °C
Stability	> 1 year under recommended storage conditions
Unit Definition	Hexokinase: One unit of hexokinase activity is defined as the amount of enzyme required to produce one μ mole of NADH from NAD ⁺ in the presence of D-glucose and glucose-6-phosphate dehydrogenase at pH 7.5 and 25 °C. G6P-DH: One unit of glucose-6-phosphate dehydrogenase activity is the amount of enzyme required to convert one μ mole of glucose-6-phosphate to 6-phosphogluconate per minute, in the presence of NADP ⁺ at pH 7.8 and 25 °C.
Storage	2–8 °C
Synonyms	Hexokinase: hexokinase; ATP:D-hexose 6-phosphotransferase G6P-DH: glucose-6-phosphate dehydrogenase (NADP ⁺); D-glucose-6-phosphate:NADP ⁺ 1-oxidoreductase



Creative Enzymes

Diagnostic Enzymes

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Buffer	3.2 M ammonium sulphate
Applications	Applications for the measurement of glucose and other hexoses in carbohydrate research and in the food and feeds, fermentation, wine, beverage and dairy industries.
Concentration	Hexokinase: ~ 420 U/mL G6P-DH: ~ 210 U/mL
Specificity	Hexokinase: Catalyses the reaction: $\text{ATP} + \text{D-hexose} = \text{ADP} + \text{D-hexose 6-phosphate}$ Phosphorylates D-glucose, D-mannose, D-fructose, sorbitol and D-glucosamine. Glucose-6-phosphate dehydrogenase: Catalyses the reaction: $\text{D-glucose 6-phosphate} + \text{NADP}^+ = \text{6-phospho-D-glucono-1,5-lactone} + \text{NADPH} + \text{H}^+$.