

## Hexokinase and Glucose-6-Phosphate Dehydrogenase Enzyme Mixture

### Product Information

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

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