Creative Enzymes
Diagnostic Enzymes

Native Microorganism Hexokinase

Product Information

Cat#	DIA-202
Abbr	Hexokinase (Microorganism)
Alias	Hexokinase
Similar	Hexokinase
Source	Microorganism
Description	A hexokinase is an enzyme that phosphorylates hexoses (six-carbon sugars), forming hexose phosphate. In most organisms, glucose is the most important substrate of hexokinases, and glucose-6-phosphate the most important product. Hexokinase can transfer an inorganic phosphate group from ATP to a substrate. Hexokinases should not be confused with glucokinase, which is a specific isoform of hexokinase. While other hexokinases are capable of phosphorylating several hexoses, glucokinase acts with a 50-fold lower substrate affinity and its only hexose substrate is glucose.
Applications	The enzyme is useful for enzymatic determination of glucose, adenosine-5'-triphosphate (ATP) and creatine phosphokinase when coupled with glucose-6-phosphate dehydrogenase.
Appearance	White amorphous powder, lyophilized
Form	Freeze dried powder
Enzyme Commission Number	EC 2.7.1.1
Activity	150U/mg-solid or more
Contaminants	Phosphoglucose isomerase < 1.0×10^{-1}% 6-Phosphogluconate dehydrogenase < 1.0×10^{-2}% Glucose-6-phosphate dehydrogenase < 1.0×10^{-2}% Myokinase < 1.0×10^{-2}% Glutathione reductase < 5.0×10^{-1}%
Molecular Weight	approx. 82 kDa (by gel filtration)

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Isoelectric point	4.1±0.1
pH Stability	pH 4.0-9.0 (25°C, 20hr)
Michaelis Constant	2.3×10^{-4}M (D-Glucose), 7.7×10^{-5}M (ATP)
Optimum pH	8.0-9.0
Optimum temperature	50°C
Thermal stability	below 45°C (pH 7.0, 30min)
Stability	Store at-20°
Inhibitors	Metal ions, p-chloromercuribenzoate, iodoacetamide, SDS, etc
Synonyms	Hexokinase; EC 2.7.1.1; hexokinase type IV glucokinase; hexokinase D; hexokinase type IV; hexokinase (phosphorylating); ATP-dependent hexokinase; glucose ATP phosphotransferase; ATP: D-hexose 6-phosphotransferase

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