



## Diagnostic Glucose Kinase

### Product Information

<b>Cat#</b>	TRA-003
<b>Description</b>	Glucose Kinase is the fourth subtype of the hexokinase family, primarily distributed in key glucose-regulating organs such as the liver, pancreas, and intestine. It functions as a glucose sensor, maintaining blood glucose homeostasis by detecting changes in glucose concentration. Its unique molecular structure and kinetic properties—including a sigmoidal activity curve and positive cooperativity—enable optimal responsiveness within the physiological glucose range, coordinating insulin secretion, hepatic glycogen synthesis, and glucagon release across multiple organs.
<b>CAS No.</b>	9001-36-9
<b>Enzyme Commission Number</b>	EC 2.7.1.2
<b>Synonyms</b>	GLCK
<b>Form</b>	White amorphous powder
<b>Source</b>	Microorganism
<b>Activity</b>	≥ 200 U/mg
<b>Unit Definition</b>	One unit will convert 1 μmol of D-Glucose to D-Glucose-6-phosphate per minute at pH 8.0 at 30°C .
<b>Molecular Weight</b>	33 kDa (SDS-PAGE)
<b>Optimum pH</b>	9.0-10.0
<b>Optimum temperature</b>	40-50°C
<b>pH Stability</b>	5.5-10.0 (25°C, 20 h)
<b>Thermal Stability</b>	< 50°C (pH 7.0, 30 min)
<b>Isoelectric Point</b>	5.7



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<b>Km Value</b>	8.0×10 <sup>-4</sup> M (D-Glucose)
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<b>Inhibitors</b>	Cu <sup>2+</sup> , Fe <sup>3+</sup> , SDS
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<b>Storage</b>	-20°C
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