Creative Enzymes®

Glucokinase 2 from Recombinant E.coli

Cat. No. NATE-1939

Lot. No. (See product label)

Introduction

Description	Glucose is phosphorylated to glucose-6-phosphate by glucokinases. This gene is alternatively spliced to generate three different forms of the enzyme; one found in the pancreas and two found in the liver. The main function of this gene is to regulate carbohydrate metabolism. Recombinant human pancreatic Glucokinase has a C-terminal FLAG tag and has 470 amino acid residues. It can be useful for studies including enzyme kinetics, activator screening and kinase selectivity.
Synonyms	EC 2.7.1.2; glucokinase; glucokinase (phosphorylating); 9001-36-9; GCK; FGQTL3; GK; GLK; HHF3; HK4; HKIV; HXKP; LGLK; MODY2; Human pancreatic glucokinase; pancreatic glucokinase

Product Information

Source	E. coli
Form	Lyophilized
EC Number	EC 2.7.1.2
Molecular Weight	ca. 32,000
Activity	>350 U/mg protein
Contaminants	(as GlcK2 activity = 100 %) Glucose-6-phosphate dehydrogenase < 0.01 % Phosphoglucomutase < 0.01 % 6-Phosphogluconate dehydrogenase < 0.01 % Hexose-6-phosphate isomerase < 0.01 % Glutathione reductase < 0.01 %
pH Stability	7.0 - 10.0
Optimum pH	9
Thermal stability	No detectable decrease in activity up to 60 °C.
Optimum temperature	70 °C
Michaelis Constant	(60mM Tris-HCl buffer, pH 8.5, at 30 °C) Glucose 0.1 mM ATP 0.05 mM
Unit Definition	One unit of activity is defined as the amount of GlcK2 that forms 1 μmol of glucose 6-phosphate per minute at 30 °C.

Storage and Shipping Information

Storage	Stable at -20°C for at least one year