Creative Enzymes®

Glucokinase from Human, recombinant

Cat. No. NATE-1696

Lot. No. (See product label)

Introduction

Description	Glucokinase (GK; EC 2.7.1.2) is an enzyme that facilitates phosphorylation of glucose to glucose-6-phosphate. Glucokinase occurs in cells in the liver, pancreas, gut, and brain of humans and most other vertebrates. In each of these organs it plays an important role in the regulation of carbohydrate metabolism by acting as a glucose sensor, triggering shifts in metabolism or cell function in response to rising or falling levels of glucose, such as occur after a meal or when fasting. Mutations of the gene for this enzyme can cause unusual forms of diabetes or hypoglycemia.
Synonyms	EC 2.7.1.2; glucokinase; glucokinase (phosphorylating); 9001-36-9; GCK; FGQTL3; GK; GLK; HHF3; HK4; HKIV; HXKP; LGLK; MODY2

Product Information

Species	Human liver
Source	E. coli
Form	Liquid
EC Number	EC 2.7.1.2
CAS No.	9001-36-9
Molecular Weight	53.2 kDa
Purity	77% (densitometry)
Activity	662 pmol/min/ug
Concentration	1.0mg/mL
Buffer	50 mM potassium phosphate pH-7.4, 50 mM sodium chloride, 0.5 mM ethylenediaminetetraaceticacid, and 2.5% glycerol.
Unit Definition	One unit is defined as the amount of enzyme that will convert 1 nmol of NADP to NADPH at 30°C. Assay conditions: 25 mM HEPES, pH 7.5, 2 nM MgCl2, 1.0 mM DTT, 0.5 mM NADP, 2 mM ATP, 25 mM glucose, 100 ug/ml BSA, 20 units/ml glucose 6-phosphate dehydrogenase, and 10 nM human liver glucokinase at 30°C for 30 min.

Storage and Shipping Information

Storage	at -80 °C