

Recombinant E. coli Glucokinase protein ab183231

1 Image

Description

Product name	Recombinant E. coli Glucokinase protein
Purity	> 95 % SDS-PAGE. ab183231 was purified using conventional chromatography techniques.
Expression system	Escherichia coli
Accession	<b><u>P0A6V8</u></b>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Escherichia coli
Sequence	MGSSHHHHHHSSGLVPRGSHMGSMTKYALVGDVGGTNA RLALCDIASGEI SQAKTYSGLDYPSPLEAVIRVYLEEHKVEVKDGCIAIACPITG DWVAMTNH TWAFSIAEMKKNLGFSHLEIINDFTAVSMAIPMLKKEHLIQF GGAEPVEG KPIAVYGAGTGLGVAHLVHVDKRWVSLPGEGGHVDFAPN SEEEAILEIL RAEIGHVSAERVLSGPGLVNLRYRAVKADNRLPENLKPKDI TERALADSC TDCRRALS LFCVIMGRFGGNLALNLGTFGGVFIAGGIVPRF LEFFKASGF RAAFEDKGRFKEYVHDIPVYLIVHDNPGLLGSGAHLRQTL GHIL
Predicted molecular weight	37 kDa including tags
Amino acids	1 to 321
Tags	His tag N-Terminus
Additional sequence information	NP_416889
Description	Recombinant <i>E. coli</i> Glucokinase protein

Specifications

Our **Abpromise guarantee** covers the use of **ab183231** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE
	Mass Spectrometry
<b>Mass spectrometry</b>	MALDI-TOF
<b>Form</b>	Liquid

## Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.  pH: 8.00 Constituents: 0.32% Tris HCl, 0.88% Sodium chloride, 10% Glycerol (glycerin, glycerine)
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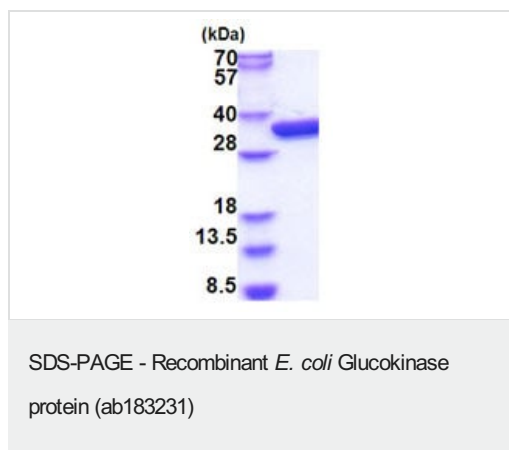
## General Info

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<b>Function</b>	Catalyzes the initial step in utilization of glucose by the beta-cell and liver at physiological glucose concentration. Glucokinase has a high Km for glucose, and so it is effective only when glucose is abundant. The role of GCK is to provide G6P for the synthesis of glycogen. Pancreatic glucokinase plays an important role in modulating insulin secretion. Hepatic glucokinase helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage.
<b>Tissue specificity</b>	Isoform 1 is expressed in pancreas. Isoform 2 and isoform 3 is expressed in liver.
<b>Involvement in disease</b>	Defects in GCK are the cause of maturity-onset diabetes of the young type 2 (MODY2) [MIM:125851]; also shortened MODY-2. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.  Defects in GCK are the cause of familial hyperinsulinemic hypoglycemia type 3 (HHF3) [MIM:602485]; also known as persistent hyperinsulinemic hypoglycemia of infancy (PHHI) or congenital hyperinsulinism. HHF is the most common cause of persistent hypoglycemia in infancy. Unless early and aggressive intervention is undertaken, brain damage from recurrent episodes of hypoglycemia may occur.
<b>Sequence similarities</b>	Belongs to the hexokinase family.

## Images

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15% SDS-PAGE analysis of ab183231 (3µg).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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