



Recombinant Rat Glucokinase (Gck)

Product Code	CSB-MP009319RA
Storage	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
Uniprot No.	P17712
Product Type	Recombinant Protein
Immunogen Species	Rattus norvegicus (Rat)
Purity	>85% (SDS-PAGE)
Sequence	MLDDRARMEA TKKEKVEQIL AEFQLQEEDL KKVMSRMQKE MDRGLRLETH EEASVKMLPT YVRSTPEGSE VGDFLSLDLG GTNFRVMLVK VGEAGEAGQWS VKTKHQMYSI PEDAMTGTAELMLFDYISECI SDFLDKHQMK HKKLPLGFTF SFPVRHEDLD KGILLNWTKG FKASGAEGNN IVGLLRDAIK RRGDFEMDVV AMVNDTVATM ISCYEDRQC EVGMIVGTGC NACYMEEMQN VELVEGDEGR MCVNTEWGAF GDSGELDEFL LEYDRMVDES SANPGQQLYE KIIGGKYMGE LVRLVLLKLV DENLLFHGEA SEQLRTRGAF ETRFVSQVES DSGDRKQIHN ILSTLGLRPS VTDCDIVRRA CESVSTRAAH MCSAGLAGVI NRMRESRSED VMRITVGVDG SVYKLHPSFK ERFHASVRRL TPNCEITFIE SEEGSGRGAA LVSAVACKKA CMLAQ
Source	Mammalian cell
Target Names	Gck
Protein Names	Recommended name: Glucokinase EC= 2.7.1.2 Alternative name(s): Hexokinase type IV Short name= HK IV Hexokinase-4 Short name= HK4 Hexokinase-D
Expression Region	1-465
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag type will be determined during the manufacturing process.
Protein Length	Full length protein
Target Details	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. Alternative splicing of this gene results in three tissue-specific forms of glucokinase, one found in pancreatic islet beta cells and two found in liver. The protein localizes to the outer membrane of mitochondria. In contrast to other forms of hexokinase, this enzyme is not inhibited by its product glucose-6-phosphate but remains active while glucose is abundant. Mutations in this gene have been associated with non-insulin dependent diabetes mellitus (NIDDM), maturity onset diabetes of the young, type 2 (MODY2) and persistent hyperinsulinemic hypoglycemia of infancy (PHHI).
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final



concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.

Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.