

**GCKR Blocking Peptide (N-Term)**  
**Synthetic peptide**  
**Catalog # BP21592a**

### Specification

#### GCKR Blocking Peptide (N-Term) - Product Information

Primary Accession [Q14397](#)

#### GCKR Blocking Peptide (N-Term) - Additional Information

##### Gene ID 2646

##### Other Names

Glucokinase regulatory protein, GKRP, Glucokinase regulator, GCKR

##### Target/Specificity

The synthetic peptide sequence is selected from aa 40-52 of HUMAN GCKR

##### Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

##### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

##### Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

#### GCKR Blocking Peptide (N-Term) - Protein Information

Name GCKR {ECO:0000303|PubMed:8589523, ECO:0000312|HGNC:HGNC:4196}

##### Function

Regulates glucokinase (GCK) by forming an inactive complex with this enzyme (PubMed:<a href="http://www.uniprot.org/citations/23621087" target="\_blank">23621087</a>, PubMed:<a href="http://www.uniprot.org/citations/23733961" target="\_blank">23733961</a>). Acts by promoting GCK recruitment to the nucleus, possibly to provide a reserve of GCK that can be quickly released in the cytoplasm after a meal (PubMed:<a href="http://www.uniprot.org/citations/10456334" target="\_blank">10456334</a>). The affinity of GCKR for GCK is modulated by fructose metabolites: GCKR with bound fructose 6-phosphate has increased affinity for GCK, while GCKR with bound fructose 1-phosphate has strongly decreased affinity for GCK and does not inhibit GCK activity (PubMed:<a href="http://www.uniprot.org/citations/23621087" target="\_blank">23621087</a>, PubMed:<a href="http://www.uniprot.org/citations/23733961" target="\_blank">23733961</a>).

##### Cellular Location

Cytoplasm. Nucleus. Mitochondrion {ECO:0000250|UniProtKB:Q07071}. Note=Under low glucose concentrations, GCKR associates with GCK and the inactive complex is recruited to the hepatocyte

nucleus.

#### **Tissue Location**

Found in liver and pancreas. Not detected in muscle, brain, heart, thymus, intestine, uterus, adipose tissue, kidney, adrenal, lung or spleen.

#### **GCKR Blocking Peptide (N-Term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

#### **GCKR Blocking Peptide (N-Term) - Images**

#### **GCKR Blocking Peptide (N-Term) - Background**

Inhibits glucokinase (GCK) by forming an inactive complex with this enzyme. The affinity of GCKR for GCK is modulated by fructose metabolites: GCKR with bound fructose 6- phosphate has increased affinity for GCK, while GCKR with bound fructose 1-phosphate has strongly decreased affinity for GCK and does not inhibit GCK activity.

#### **GCKR Blocking Peptide (N-Term) - References**

Warner J.P.,et al.Mamm. Genome 6:532-536(1995).  
Hayward B.E.,et al.Genomics 49:137-142(1998).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Hillier L.W.,et al.Nature 434:724-731(2005).  
de la Iglesia N.,et al.FEBS Lett. 456:332-338(1999).