

GCKR Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP8143a**Specification**

GCKR Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q14397](#)**GCKR Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 2646**Other Names**

Glucokinase regulatory protein, GGRP, Glucokinase regulator, GCKR

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8143a](/product/products/AP8143a) was selected from the N-term region of human GCKR. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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 Antibody (N-term) Blocking Peptide - 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: [23621087](http://www.uniprot.org/citations/23621087), PubMed: [23733961](http://www.uniprot.org/citations/23733961)). 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: [10456334](http://www.uniprot.org/citations/10456334)). 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: [23621087](http://www.uniprot.org/citations/23621087), PubMed: [23733961](http://www.uniprot.org/citations/23733961)).

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 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

GCKR Antibody (N-term) Blocking Peptide - Images**GCKR Antibody (N-term) Blocking Peptide - Background**

GCKR belongs to the SIS (Sugar ISomerase) family of proteins. The gene product is a regulatory protein that inhibits glucokinase in liver and pancreatic islet cells by binding non-covalently to form an inactive complex with the enzyme. This gene is considered a susceptibility gene candidate for a form of maturity-onset diabetes of the young (MODY).

GCKR Antibody (N-term) Blocking Peptide - References

Veiga-da-Cunha, M., et al., Diabetologia 46(5):704-711 (2003).Hayward, B.E., et al., Genomics 49(1):137-142 (1998).Hayward, B.E., et al., Mamm. Genome 7(6):454-458 (1996).Warner, J.P., et al., Mamm. Genome 6(8):532-536 (1995).Vaxillaire, M., et al., Diabetes 43(3):389-395 (1994).