10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GCKR Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP8143b

Specification

GCKR Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q14397

GCKR Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2646

Other Names
Glucokinase regulatory protein, GKRP, Glucokinase regulator, GCKR

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8143b was selected from the C-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 (C-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, PubMed: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). 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, PubMed: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 (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

GCKR Antibody (C-term) Blocking Peptide - Images

GCKR Antibody (C-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. Th GCKR gene is considered a susceptibility gene candidate for a form of maturity-onset diabetes of the young (MODY).

GCKR Antibody (C-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).