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

Goat Anti-GCKR Antibody

Peptide-affinity purified goat antibody
Catalog # AF1472a

Specification

Goat Anti-GCKR Antibody - Product Information

Application	**WB, E**
Primary Accession	Q14397
Other Accession	NP_001477, 2646, 231103 (mouse), 25658 (rat)
Reactivity	**Mouse, Rat**
Predicted	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5mg/ml**
Isotype	**IgG**
Calculated MW	**68685**

Goat Anti-GCKR Antibody - Additional Information

Gene ID 2646

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

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-GCKR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-GCKR Antibody - 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:<a

href="http://www.uniprot.org/citations/23733961" target="_blank">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.

Goat Anti-GCKR Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-GCKR Antibody - Images

AF1472a (0.1 µg/ml) staining of Rat Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-GCKR Antibody - Background

This gene encodes a protein belonging to the GCKR subfamily of 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).

Goat Anti-GCKR Antibody - References

Genome-wide association study identifies novel loci for plasma levels of protein C: the ARIC study. Tang W, et al. Blood, 2010 Aug 27. PMID 20802025. Interactions of dietary whole grain intake with fasting glucose- and insulin-related genetic loci in individuals of European descent: a meta-analysis of 14 cohort studies. Nettleton JA, et al. Diabetes Care, 2010 Aug 12. PMID 20693352. COMMON VARIANTS IN 40 GENES ASSESSED FOR DIABETES INCIDENCE AND RESPONSE TO METFORMIN AND LIFESTYLE INTERVENTIONS IN THE DIABETES PREVENTION PROGRAM. Jablonski KA, et al. Diabetes, 2010 Aug 3. PMID 20682687. Pharmacogenetic analysis of lipid responses to rosuvastatin in Chinese patients. Hu M, et al. Pharmacogenet Genomics, 2010 Oct. PMID 20679960. Effects of GCK, GCKR, G6PC2 and MTNR1B variants on glucose metabolism and insulin secretion. Hu C, et al. PLoS One, 2010 Jul 23. PMID 20668700.