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Glucokinase regulatory protein Rabbit pAb

Catalog # AP97519

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q14397
Other Accession	Q14397
Reactivity	Rat
Predicted	Pig, Human, Mouse, Rabbit, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68685
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GCKR
Epitope Specificity	121-220/625
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the GCKR family.Contains 2 SIS domains.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	GCKR is a subfamily member of the SIS (Sugar ISomerase) family of proteins. It 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.

Additional Information

Gene ID	2646
Other Names	FGQTL5; GKRP; GCKR_HUMAN; GCKR; Glucokinase regulator; glucokinase (hexokinase 4) regulatory protein; hexokinase 4 regulator
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.