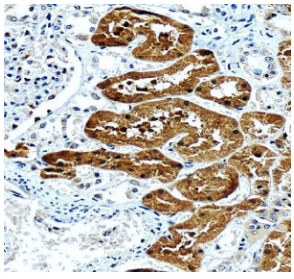
Glycerol Kinase Antibody / Lipid Metabolism Enzyme Antibody (RQ4117)

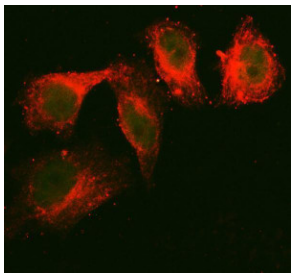
Catalog No.	Formulation	Size
RQ4117	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

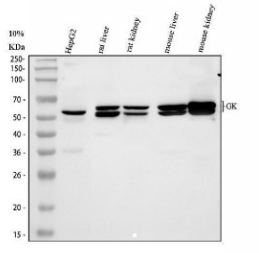
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P32189
Applications	Western Blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This Glycerol Kinase Antibody / Lipid Metabolism Enzyme Antibody is available for research use only.



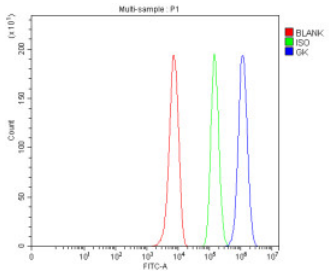
Glycerol Kinase Antibody Human Kidney IHC. Immunohistochemical staining of FFPE human kidney tissue using Glycerol Kinase Antibody at 2 ug/ml with HRP/DAB detection following heat-induced epitope retrieval in pH8 EDTA buffer. Strong cytoplasmic staining is observed in renal tubular epithelial cells, consistent with the high metabolic activity and glycerol kinase expression expected in kidney tissue. This staining pattern demonstrates the utility of Glycerol Kinase Antibody, a Lipid Metabolism Enzyme Antibody, for investigating glycerol metabolism, renal energy homeostasis and lipid metabolic pathways in human tissues.



Glycerol Kinase Antibody Human HeLa IF. Immunofluorescent staining of HeLa human cervical cancer cells using Glycerol Kinase Antibody (green) together with an alpha tubulin antibody (red) following enzyme-mediated antigen retrieval. Glycerol kinase displays predominantly cytoplasmic staining with a diffuse to punctate distribution, consistent with its role as a cytosolic enzyme involved in glycerol utilization and lipid metabolism. This result demonstrates the utility of Glycerol Kinase Antibody, a Lipid Metabolism Enzyme Antibody, for investigating glycerol kinase localization, cellular metabolism and energy homeostasis in cultured human cells.



Glycerol Kinase Antibody Human, Mouse and Rat WB. Western blot analysis of Glycerol Kinase Antibody using lysates from lane 1: human HepG2 cells, lane 2: rat liver, lane 3: rat kidney, lane 4: mouse liver and lane 5: mouse kidney. Specific bands are detected at approximately 57-61 kDa, consistent with the expected molecular weight of endogenous glycerol kinase. The closely spaced doublet likely reflects alternative isoforms and/or post-translationally modified forms of the protein. These results demonstrate cross-species detection of glycerol kinase in metabolically active tissues and support the use of Glycerol Kinase Antibody, a Lipid Metabolism Enzyme Antibody, for studies of glycerol metabolism, hepatic function and energy homeostasis.



Glycerol Kinase Antibody Human HepG2 FACS. Flow cytometry analysis of fixed and permeabilized HepG2 human liver cells stained with Glycerol Kinase Antibody at 1 ug/10^6 cells, followed by a Fluoro488-conjugated secondary antibody. The blue histogram (GK) shows a clear rightward shift relative to the rabbit IgG isotype control (green) and unstained cells (red), demonstrating specific intracellular detection of endogenous glycerol kinase. These results support the use of Glycerol Kinase Antibody, a Lipid Metabolism Enzyme Antibody, for analyzing glycerol kinase expression, lipid metabolism and cellular energy homeostasis by flow cytometry.

Description

Glycerol Kinase Antibody / Lipid Metabolism Enzyme Antibody recognizes glycerol kinase (GK), a cytosolic enzyme that catalyzes the ATP-dependent phosphorylation of glycerol to glycerol-3-phosphate. This reaction represents the first committed step in glycerol metabolism and links carbohydrate and lipid metabolic pathways by supplying intermediates for triglyceride synthesis, phospholipid production and energy generation. Because glycerol kinase occupies a central position in metabolic homeostasis, it is widely studied in the context of obesity, diabetes, liver function and inherited metabolic disorders. NSJ Bioreagents offers high-quality Glycerol Kinase Antibody reagents for investigating lipid metabolism and cellular energy regulation.

Glycerol-3-phosphate generated by glycerol kinase serves as an important precursor for the biosynthesis of triglycerides and membrane phospholipids while also contributing to glycolytic and gluconeogenic pathways. Glycerol kinase is expressed most abundantly in liver, kidney and other metabolically active tissues where it regulates glycerol utilization according to nutritional status and energy demand. Through its role in coordinating lipid storage and energy production, Glycerol Kinase Antibody is widely used to investigate metabolic adaptation, hepatic function and lipid homeostasis in both normal physiology and disease.

Mutations in the GK gene cause glycerol kinase deficiency, an inherited metabolic disorder characterized by impaired glycerol metabolism and variable clinical manifestations ranging from isolated hyperglycerolemia to complex multisystem disease. Altered glycerol kinase activity has also been investigated in obesity, insulin resistance, fatty liver disease and cancer metabolism, where metabolic reprogramming supports cellular growth and survival. Continued research has expanded understanding of how glycerol kinase contributes to lipid utilization, metabolic flexibility and whole-body energy balance across diverse physiological conditions.

A Glycerol Kinase Antibody is a valuable reagent for investigating glycerol metabolism, lipid homeostasis and cellular

energy regulation. A Lipid Metabolism Enzyme Antibody supports research involving triglyceride biosynthesis, hepatic metabolism, metabolic disease, glycerol kinase deficiency and the molecular control of energy metabolism.

Researchers studying lipid metabolism, energy homeostasis and metabolic regulation may also be interested in our Metabolism Research Antibodies page, featuring antibodies against enzymes involved in carbohydrate, lipid and energy metabolism.

Application Notes

Optimal dilution of the Glycerol Kinase Antibody / Lipid Metabolism Enzyme Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein corresponding to amino acids M1-S180 was used as the immunogen for the Glycerol Kinase antibody.

Storage

After reconstitution, the Glycerol Kinase antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Glycerol Kinase antibody, Lipid Metabolism Enzyme antibody, GK antibody, ATP:Glycerol 3-Phosphotransferase antibody

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