

Anti-Glycerol kinase Picoband Antibody

Catalog # ABO12997

Product Information

Application	WB, IHC-P, E
Primary Accession	P32189
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Glycerol kinase detection. Tested with WB, IHC-P, Direct ELISA in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2710
Other Names	Glycerol kinase, GK, Glycerokinase, 2.7.1.30, ATP:glycerol 3-phosphotransferase, GK
Calculated MW	61245
Application Details	Western blot, 0.1-0.5 µg/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml Direct ELISA, 0.1-0.5 µg/ml
Subcellular Localization	Mitochondrion outer membrane; In sperm and fetal tissues, the majority of the enzyme is bound to mitochondria, but in adult tissues, such as liver found in the cytoplasm.
Tissue Specificity	Highly expressed in the liver, kidney and testis. Isoform 2 and isoform 3 are expressed specifically in testis and fetal liver, but not in the adult liver.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E. coli-derived human Glycerol kinase recombinant protein (Position: M1-S180).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C; for one year. After r° Constitution, at 4° C; for one month. It° Can

also be aliquotted and stored frozen at -20 °C; for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name	GK (HGNC:4289)
Function	Kinase that plays a key role in glycerol metabolism, catalyzing its phosphorylation to produce sn-glycerol 3-phosphate. Sn- glycerol 3-phosphate is a crucial intermediate in various metabolic pathways, such as the synthesis of glycerolipids and triglycerides, glycogenesis, glycolysis and gluconeogenesis.
Cellular Location	Mitochondrion outer membrane; Single-pass membrane protein. Nucleus. Cytoplasm, cytosol. Note=Glycerol kinase activity is more cytosolic in some tissues. It probably represents the expression of isoforms lacking a transmembrane domain [Isoform 4]: Cytoplasm, cytosol. Note=In adult tissues, such as liver the glycerol kinase activity is more cytosolic. It probably represents the expression of this isoform which lacks a transmembrane domain
Tissue Location	[Isoform 2]: Widely expressed in fetal and adult tissues. [Isoform 4]: The sole isoform expressed in adult liver and kidney.

Background

Glycerol kinase is a phosphotransferase enzyme involved in triglycerides and glycerophospholipids synthesis. The protein encoded by this gene belongs to the FGGY kinase family. This protein is a key enzyme in the regulation of glycerol uptake and metabolism. It catalyzes the phosphorylation of glycerol by ATP, yielding ADP and glycerol-3-phosphate. Mutations in this gene are associated with glycerol kinase deficiency (GKD). Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

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