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Anti-Glycerol Kinase 2 Antibody

Catalog # AP51231

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q14410
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60594

Additional Information

Gene ID	2712
Other Names	GKP2; GKTA; Glycerol kinase 2; GK 2; Glycerokinase 2; ATP:glycerol 3-phosphotransferase 2; Glycerol kinase, testis specific 2
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Glycerol Kinase 2. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

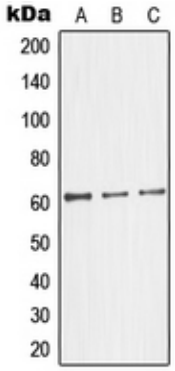
Name	GK2 (HGNC:4291)
Synonyms	GKP2, GKTA
Function	Key enzyme in the regulation of glycerol uptake and metabolism. Essential for male fertility and sperm mitochondrial sheath formation (By similarity). Required for proper arrangement of crescent- like mitochondria to form the mitochondrial sheath during spermatogenesis (By similarity). Can induce mitochondrial clustering through interactions with PLD6 and up-regulation of phosphatidic acid synthesis in the mitochondria (PubMed:28852571).
Cellular Location	Mitochondrion outer membrane {ECO:0000250|UniProtKB:Q9WU65}; Single-pass type IV membrane protein {ECO:0000250|UniProtKB:Q9WU65}. Cytoplasm. Note=In sperm the majority of the enzyme is bound to mitochondria {ECO:0000250|UniProtKB:Q9WU65}
Tissue Location	Testis-specific (PubMed:33536340). Expressed in the midpiece of spermatozoa

(PubMed:28852571)

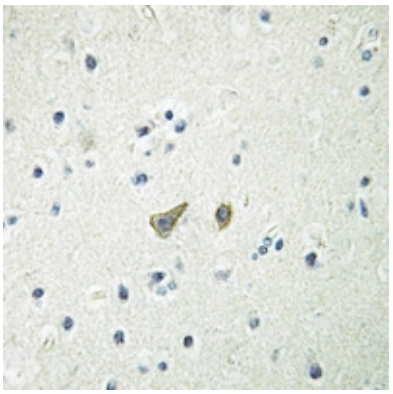
References

Sargent C.A.,et al.Hum. Mol. Genet. 3:1317-1324(1994).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

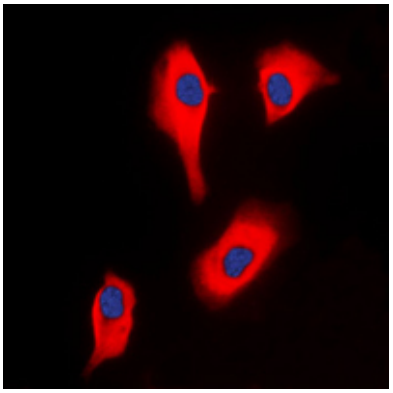
Images



Western blot analysis of Glycerol Kinase 2 expression in HepG2 (A), HeLa (B), Jurkat (C) whole cell lysates. (Predicted band size: 60 kD; Observed band size: 61 kD)



Immunohistochemical analysis of Glycerol Kinase 2 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Glycerol Kinase 2 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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