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

GCAT Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7498c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	O75600
Other Accession	O88986, Q0P5L8
Reactivity	Human, Mouse
Predicted	Bovine, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18219
Calculated MW	45285
Antigen Region	155-181

Additional Information

Gene ID	23464
Other Names	2-amino-3-ketobutyrate coenzyme A ligase, mitochondrial, AKB ligase, Aminoacetone synthase, Glycine acetyltransferase, GCAT, KBL
Target/Specificity	This GCAT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 155-181 amino acids from the Central region of human GCAT.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GCAT Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GCAT (HGNC:4188)
Synonyms	KBL

Function	Pyridoxal phosphate (PLP) dependent enzyme, which catalyzes the cleavage of 2-amino-3-oxobutanoate to glycine and acetyl-CoA.
Cellular Location	Mitochondrion {ECO:0000250|UniProtKB:Q0P5L8}. Nucleus. Note=Translocates to the nucleus upon cold and osmotic stress.
Tissue Location	Strongly expressed in heart, brain, liver and pancreas. Also found in lung.

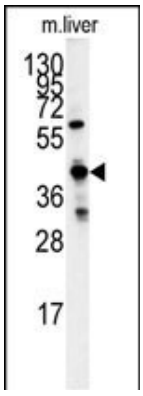
Background

The degradation of L-threonine to glycine consists of a two-step biochemical pathway involving the enzymes L-threonine dehydrogenase and 2-amino-3-ketobutyrate coenzyme A ligase. L-Threonine is first converted into 2-amino-3-ketobutyrate by L-threonine dehydrogenase. GCAT is the second enzyme in this pathway, which then catalyzes the reaction between 2-amino-3-ketobutyrate and coenzyme A to form glycine and acetyl-CoA. The enzyme is considered a class II pyridoxal-phosphate-dependent aminotransferase.

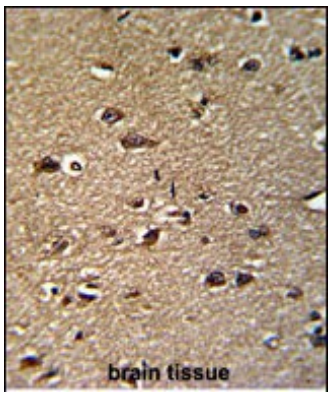
References

Edgar,A.J., Polak,J.M.Eur. J. Biochem. 267 (6), 1805-1812 (2000)
Tressel,T., Thompson,R., J. Biol. Chem. 261 (35), 16428-16437 (1986)

Images

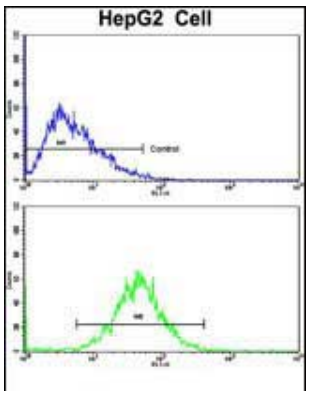


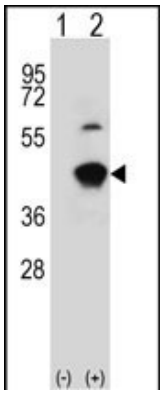
Western blot analysis of GCAT antibody (Center) (Cat.#AP7498c) in mouse liver tissue lysates (35ug/lane). GCAT (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human brain reacted with GCAT Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Flow cytometric analysis of HepG2 cells using GCAT Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.





Western blot analysis of GCAT (arrow) using rabbit polyclonal GCAT Antibody (Center) (Cat.#AP7498c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the GCAT gene.

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