

Recombinant Human glycine C-acetyltransferase, His-tagged

Cat. No. GCAT-567H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	GCAT, 22-419aa , Human, His tag, E.coli
Species	Human
Source	E.coli
ProteinLength	22-419 a.a.
Description	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. Recombinant human GCAT protein, fused to His-tag at N-terminus, was expressed in E.coli.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 0.4M urea, 10% glycerol
Molecular Mass	45.0kDa (419aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MSALAQLRGI LEGELEGIRG AGTWKSERVI TSRQGPHIRV DGVSGGILNF CANNYLGLSS HPEVIQAGLQ ALEEFGAGLS SVRFICGTQS IHKNLEAKIA RFHQREDAIL YPSCYDANAG LFEALLTPED AVLSDELNHA SIIDGIRLCK AHKYRYRHL D MADLEAKLQE AQKHRLRLVA

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TDGAFSMDGD IAPLQEICCL ASRYGALVFM DECHATGFLG PTGRGTDELL
 GVMDQVTIIN STLKALGGA SGGYTTGPGP LVSLLRQRR PYLFSNSLPP
 AVVGCASKAL DLLMGSNTIV QSMAAKTQRF RSKMEAAGFT ISGASHPICP
 VMLGDARLAS RMADDMLKRG IFVIGFSYPV VPKGKARIRV QISAVHSEED
 IDRCVEAFVE VGRLHGALP

Purity >85% by SDS - PAGE

Storage Can be stored at +4C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles.

Concentration 1 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name [GCAT glycine C-acetyltransferase \[Homo sapiens \]](#)

Official Symbol GCAT

Synonyms GCAT; glycine C-acetyltransferase; glycine C acetyltransferase (2 amino 3 ketobutyrate coenzyme A ligase); 2-amino-3-ketobutyrate coenzyme A ligase, mitochondrial; 2 amino 3 ketobutyrate coenzyme A ligase; KBL; AKB ligase; aminoacetone synthase; glycine acetyltransferase; 2-amino-3-ketobutyrate-CoA ligase; MGC23053;

Gene ID [23464](#)

mRNA Refseq [NM_001171690](#)

Protein Refseq [NP_001165161](#)

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MIM	607422
UniProt ID	O75600
Chromosome Location	22q13.1
Pathway	Glycine, serine and threonine metabolism, organism-specific biosystem; Glycine, serine and threonine metabolism, conserved biosystem; threonine degradation II, organism-specific biosystem;
Function	glycine C-acetyltransferase activity; pyridoxal phosphate binding; transferase activity, transferring acyl groups; transferase activity, transferring nitrogenous groups;

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