# Recombinant human GCAT protein

Catalog Number: ATGP2082

## PRODUCT INFORMATION

**Expression system**
E.coli

**Domain**
22-419aa

**UniProt No.**
O75600

**NCBI Accession No.**
NP_055106

**Alternative Names**
Glycine C-acetyltransferase, Glycine C-acetyltransferase, 2-amino-3-ketobutyrate coenzyme A ligase, mitochondrial, AKB ligase, Aminoacetone synthase, Glycine acetyltransferase, KBL

## PRODUCT SPECIFICATION

**Molecular Weight**
45kDa (419aa)

**Concentration**
1mg/ml (determined by Bradford assay)

**Formulation**
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.4M urea, 10% glycerol

**Purity**
> 85% by SDS-PAGE

**Tag**
His-Tag

**Application**
SDS-PAGE, Denatured

**Storage Condition**
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

**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.

**Amino acid Sequence**

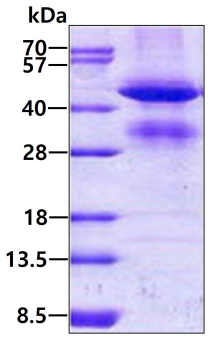
<MGSSHHHHHH SSGLVPRGSH M>SALAQLRGI LEGELEGIRG AGTWKSERVI TSRQGPHIRV DGVSGGILNF CANNYLGLSS HPEVIQAGLQ ALEEFGAGLS SVRFICGTQS IHKNLEAKIA RFHQREDAIL YPSCYDANAG LFEALLTPED AVLSDELNHA SIIDGIRLCK AHKYRYRHLD MADLEAKLQE AQKHRLRLVA TDGAFSMDGD IAPLQEICCL ASRYGALVFM DECHATGFLG PTGRGTDELL GVMDQVTIIN STLGKALGGA SGGYTTGPGP LVSLLRQRAR PYLFSNSLPP AVVGCASKAL DLLMGSNTIV QSMAAKTQRF RSKMEAAGFT ISGASHPICP VMLGDARLAS RMADDMLKRG IFVIGFSYPV VPKGKARIRV QISAVHSEED IDRCVEAFVE VGRLHGALP

**General References**

Edgar A.J., et al. (2000) Eur. J. Biochem. 267:1805-1812
Hoshino A., et al. (2007) Cell Stress Chaperones. 12:186-191

## DATA

**SDS-PAGE**




3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.