
Product Data Sheet

Product Name: GCAT Human
 Cat. No.: GP21665
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	2-amino-3-ketobutyrate coenzyme A ligase mitochondrial; AKB ligase; EC 2.3.1.29; Aminoacetone synthase; Glycine acetyltransferase; GCAT; KBL.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MSALAQLRGI LELEGIRG AGTWKSERVI TSRQGPHIRV DGVSGGILNF CANNYLGLSS HPEVIQAGLQ ALEEFGAGLS SVRFICGTQS IHKNLEAKIA RFHQREDAIL YPSCYDANAG LFEALLTPED AVLSDELNHA SIIDGIRLCK AHKYRYRHLDMADLEAKLQE AQKHRLRLVA TDGAFSMDGD IAPLQEICCL ASRYGALVFM DECHATGFLG PTGRGTDELL GVMDQVTIIN STLGKALGGA SGGYTTGPGP LVLLRQRAR PYLFSNSLPP AVVGCASKAL DLLMGSNTIV QSMAAKTQRF RSKMEAAGFT ISGASHPICP VMLGDARLAS RMADDMLKRG IFVIGFSYPV VPKGKARIRV QISAVHSEED IDRCVEAFVE VGRLHGALP.		
Formulation	GCAT protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH 8.0), 0.4M urea and 10% glycerol.		

Introduction

L-threonine to glycine degradation consists of a two-step biochemical pathway which involves the enzymes L-threonine dehydrogenase and 2-amino-3-ketobutyrate coenzyme A ligase. L-Threonine is initially converted into 2-amino-3-ketobutyrate by L-threonine dehydrogenase. Glycine C-Acetyltransferase (GCAT) is the 2nd enzyme in this pathway, which subsequently catalyzes the reaction between 2-amino-3-ketobutyrate and coenzyme A to form glycine and acetyl-CoA. The GCAT enzyme is regarded as a class II pyridoxal-phosphate-dependent aminotransferase. GCAT is strongly expressed in the heart, brain, liver and pancreas. GCAT is also found in lung.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store frozen at -20°C for longer

Caution: Product has not been fully validated for medical applications. For research use only.

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

GCAT Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 419 amino acids (22-419 a.a) and having a molecular mass of 45kDa. GCAT is fused to a 21 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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