
Product Data Sheet

Product Name: GATM Human
 Cat. No.: GP21662
 Batch No.: 1

Product Data

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glycine amidinotransferase; mitochondrial; L-arginine:glycine amidinotransferase; Transamidinase; GATM; AGAT; AT.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMSTQAAT ASSRNSCAAD DKATEPLPKD CPVSSYNEWD PLEEVIVGRA ENACVPPFTI EVKANTYEKY WPFYQKQGGH YFPKDHLKKA VAEIEEMCNI LKTEGVTVRR PDPIDWSLKY KTPDFESTGL YSAMPRDILI VVGNEIIEAP MAWRSRFFEYRAYRSIIKDY FHRGAKWTTA PKPTMADELY NQDYPIHSVE DRHKLAAQ GK FVTTEFEPCF DAADFIRAGR DIFAQRSQVT NYLGIEWMRR HLAPDYRVHI ISFKDPNPMH IDATFNIIGP GIVLSNPDRP CHQIDLFKKA GWTIITPPTP IIPDDHPLWM SSKWLSMNVL MLDEKRVMDANEVPIQKMF EKLGITTIKV NIRNANSLGG GFHCWTCDVR RRGTLQSYLD.		
Formulation	The GATM solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 2mM DTT, 10% glycerol and 200mM NaCl.		

Introduction

Glycine amidinotransferase mitochondrial (GATM) is a mitochondrial enzyme which is a member of the amidinotransferase family. The GATM enzyme is involved in creatine biosynthesis, where it catalyzes the transfer of a guanido group from L-arginine to glycine, resulting in guanidinoacetic acid, the immediate precursor of creatine, which has an imperative role in energy metabolism in muscle tissues. GATM is significant in embryonic and central nervous system development. GATM gene mutations cause arginine:glycine amidinotransferase deficiency, an inborn error of creatine synthesis characterized by mental retardation, language impairment, and behavioral disorders.

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

GATM Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 410 amino acids (38-423) and having a molecular mass of 46.9kDa (Molecular size on SDS-PAGE will appear higher). GATM is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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