

GATM Blocking Peptide(C-term)
Synthetic peptide
Catalog # BP19715b**Specification**

GATM Blocking Peptide(C-term) - Product Information

Primary Accession [P50440](#)
Other Accession [P50442](#), [P50441](#), [Q9D964](#), [Q4R806](#), [Q2HJ74](#),
[NP_001473.1](#)

GATM Blocking Peptide(C-term) - Additional Information

Gene ID 2628

Other Names

Glycine amidinotransferase, mitochondrial, L-arginine:glycine amidinotransferase, Transamidinase, GATM, AGAT

Target/Specificity

The synthetic peptide sequence is selected from aa 365-378 of HUMAN GATM

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GATM Blocking Peptide(C-term) - Protein Information

Name GATM

Synonyms AGAT

Function

Transamidinase that catalyzes the transfer of the amidino group of L-arginine onto the amino moiety of acceptor metabolites such as glycine, beta-alanine, gamma-aminobutyric acid (GABA) and taurine yielding the corresponding guanidine derivatives (PubMed:3800397, PubMed:16820567, PubMed:36543883, PubMed:27233232). Catalyzes the rate- limiting step of creatine biosynthesis, namely the transfer of the amidino group from L-arginine to glycine to generate guanidinoacetate, which is then methylated by GAMT to form creatine. Provides creatine as a source for ATP generation in tissues with high energy demands, in

particular skeletal muscle, heart and brain (PubMed:3800397, PubMed:36543883, PubMed:9266688, PubMed:27233232) (Probable).

Cellular Location

[Isoform 1]: Mitochondrion inner membrane; Peripheral membrane protein; Intermembrane side.
Note=Probably attached to the outer side of the inner membrane

Tissue Location

Expressed in brain, heart, kidney, liver, lung, salivary gland and skeletal muscle tissue, with the highest expression in kidney. Biallelically expressed in placenta and fetal tissues

GATM Blocking Peptide(C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

GATM Blocking Peptide(C-term) - Images

GATM Blocking Peptide(C-term) - Background

This gene encodes a mitochondrial enzyme that belongs to the amidinotransferase family. This enzyme is involved in creatine biosynthesis, whereby it catalyzes the transfer of a guanido group from L-arginine to glycine, resulting in guanidinoacetic acid, the immediate precursor of creatine. Mutations in this gene cause arginine:glycine amidinotransferase deficiency, an inborn error of creatine synthesis characterized by mental retardation, language impairment, and behavioral disorders.

GATM Blocking Peptide(C-term) - References

Kottgen, A., et al. Nat. Genet. 42(5):376-384(2010)
Kottgen, A., et al. Nat. Genet. 41(6):712-717(2009)
Lion-Francois, L., et al. Neurology 67(9):1713-1714(2006)
Cullen, M.E., et al. Circulation 114 (1 SUPPL), I16-I20 (2006) :
Battini, R., et al. J. Pediatr. 148(6):828-830(2006)