abcam

Product datasheet

Recombinant Human GATM protein ab123149

1 Image

Overview

Product name	Recombinant Human GATM protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Accession	P50440
Species	Human
Sequence	MGSSHHHHHHSSGLVPRGSHMGSMSTQAATASSRNSCAADDKATEPLPKD CPVSSYNEWDPLEEVIVGRAENACVPPFTIEVKANTYEKYWPFYQKQGGH YFPKDHLKKAVAEIEEMCNILKTEGVTVRRPDPIDWSLKYKTPDFESTGL YSAMPRDILIVVGNEIIEAPMAWRSRFFEYRAYRSIIKDYFHRGAKWTTA PKPTMADELYNQDYPIHSVEDRHKLAAQGKFVTTEFEPCFDAADFIRAGR DIFAQRSQVTNYLGIEWMRRHLAPDYRVHIISFKDPNPMHIDATFNIIGP GIVLSNPDRPCHQIDLFKKAGWTIITPPTPIIPDDHPLWMSSKWLSMNVL MLDEKRVMVDANEVPIQKMFEKLGITTIKVNIRNANSLGGGFHCWTCDVR RRGTLQSYLD
Molecular weight	47 kDa including tags
Amino acids	38 to 423
Tags	His tag N-Terminus

Specifications

Our Abpromise guarantee covers the use of **ab123149** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Mass Spectrometry
Mass spectrometry	MALDI-TOF
Purity	> 90 % SDS-PAGE.

ab123149 was purified using conventional chromatography.

Form Liquid

Preparation and Storage

Stability and Storage

Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

pH: 8.00
Constituents: 0.03% DTT, 0.32% Tris HCl, 10% Glycerol, 1.17% Sodium chloride

General Info

Function

Catalyzes the biosynthesis of guanidinoacetate, the immediate precursor of creatine. Creatine plays a vital role in energy metabolism in muscle tissues. May play a role in embryonic and central nervous system development. May be involved in the response to heart failure by elevating local creatine synthesis.

Tissue specificity

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.

Pathway

Amine and polyamine biosynthesis; creatine biosynthesis; creatine from L-arginine and glycine: step 1/2.

Involvement in disease

Defects in GATM are the cause of arginine:glycine amidinotransferase deficiency (AGAT deficiency) [MIM:612718]. AGAT deficiency is an autosomal recessive disorder characterized by developmental delay/regression, mental retardation, severe disturbance of expressive and cognitive speech, and severe depletion of creatine/phosphocreatine in the brain.

Sequence similarities

Belongs to the amidinotransferase family.

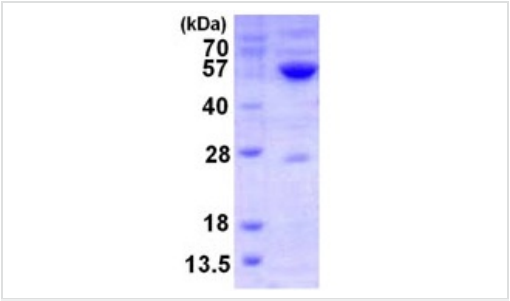
Domain

One chain folds into a compact single domain composed of repeating units, five beta-beta-alpha-beta modules, which surround the central active site.

Cellular localization

Mitochondrion inner membrane. Cytoplasm. The mitochondrial form is found in the intermembrane space probably attached to the outer side of the inner membrane.

Images



SDS-PAGE - GATM protein (ab123149)

15% SDS PAGE, 3 µg of ab123149 loaded.

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- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit http://www.abcam.com/abpromise or contact our technical team.

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