



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human MAT2A Protein
Catalog Number: hRP-0901
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human methionine adenosyltransferase II, alpha (MAT2A) gene catalyzes the production of S-adenosylmethionine (AdoMet) from methionine and ATP. AdoMet is the key methyl donor in cellular processes. Recent data indicated that epigenomic regulation of MAT2A promoter activity, such as MAT2A promoter hypomethylation in human liver cancer occurred with poorer prognosis.

Full-length mature human MAT2A (395 aa) gene was constructed with 15 aa N-terminal T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: MAT2A (MATA2; MATII; SAMS2)
Accession Number: NP_005902
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Frau,M., et al., *Role of transcriptional and posttranscriptional regulation of methionine adenosyltransferases in liver cancer progression*. Hepatology 56 (1), 165-175 (2012)

Yang,H., et al., *Insulin-like growth factor 1 activates methionine adenosyltransferase 2A*



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transcription by multiple pathways in human colon cancer cells. Biochem. J. 436 (2), 507-516 (2011)

Liu, Q., et al., *Hypoxia induces genomic DNA demethylation through the activation of HIF-1alpha and transcriptional upregulation of MAT2A in hepatoma cells.* Mol. Cancer Ther. 10 (6), 1113-1123 (2011)

Applications

1. May be used for in vitro MAT2A mediated production of S-adenosylmethionine regulation study with “ProFectin” based intracellular delivery of this protein.
2. May be used as specific substrate protein for kinase and ubiquitin related enzyme functional screening assays.
3. May be used for mapping MAT2A protein-protein interaction.
4. Potential diagnostic biomarker protein for both liver and colon cancers.
5. May be used as antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFMNGQLNGFHEAFIEEGTFLFTSESVGEGHPDKICDQISDAVLDAHLQQD
PDAKVACETVAKTGMILLAGEITSRAAVDYQKVVREAVKHIGYDDSSKGFYKTCNVLVALEQQ
SPDIAQGVHLDRNEEDIGAGDQGLMFGYATDETEECMPLTIVLAHKLNAKLAELRRNGTLPWLR
PDSKTQVTVQYMQDRGAVLPPIRVHTIVISVQHDEEVCLDEMARDALKEKVIKAVVPAKYLDEDTI
YHLQPSGRFVIGGPQGDAGLTGRKIIIVDTYGGWGAHGGGAFSGKDYTKVDRSAAYAARWVAKSL
VKGGLCRRVLVQVSYAIGVSHPLSISIFHYGTSQKSERELLEIVKKNFDLRPGVIVRDLDLKKP
IYQRTAAYGHFGRDSFPWEVPKLLKY