Product Data Sheet

Product Name:	MAT1A Human
Cat. No.:	GP21901
Batch No.:	1

Product Data

Purity	>98%	Source	Escherichia Coli.
Phycical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	EC 2.5.1.6; MAT; MATA1; SAMS; SAMS1; Methionine adenosyltransferase 1; S-adenosylmethionine synthase isoform type-1; AdoMet synthase 1; MAT 1; Methionine adenosyltransferase I/III; MAT-I/III; MAT1A; AMS1.		
Amino Acid Sequence	MGSSHHHHHS SGLVPRGSHM NGPVDGLCDH SLSEGVFMFT SESVGEGHPD KICDQISDAV LDAHLKQDPN AKVACETVCK TGMVLLCGEI TSMAMVDYQR VVRDTIKHIG YDDSAKGFDF KTCNVLVALE QQSPDIAQCV HLDRNEEDVG AGDQGLMFGY ATDETEECMP LTIILAHKLN ARMADLRRSG LLPWLRPDSK TQVTVQYMQD NGAVIPVRIH TIVISVQHNE DITLEEMRRA LKEQVIRAVV PAKYLDEDTV YHLQPSGRFV IGGPQGDAGV TGRKIIVDTY GGWGAHGGGA FSGKDYTKVD RSAAYAARWV AKSLVKAGLC RRVLVQVSYA IGVAEPLSIS IFTYGTSQKT ERELLDVVHK NFDLRPGVIV RDLDLKKPIY QKTACYGHFG RSEFPWEVPR KLVF.		
Formulation	The MAT1A protein solution contains 20mM Tris-HCl pH-8, 1mM DTT, 100mM NaCl and 10% glycerol.		

Introduction

MAT1A catalyzes a two-step reaction that involves the transfer of the adenosyl moiety of ATP to methionine to form S-adenosylmethionine and tripolyphosphate, which is subsequently cleaved to PPi and Pi. S-adenosylmethionine is the source of methyl groups for most biological methylations. MAT1A is found as a homotetramer (MAT I) or a homodimer (MAT III) whereas a third form, MAT II (gamma), is encoded by the MAT2A gene. Mutations in MAT1A gene are associated with methionine adenosyltransferase deficiency. MAT1A expression also correlates with a differentiated phenotype, whereas liver cells expressing MAT2A present a dedifferentiated phenotype and lowered AdoMet synthesis. Likewise, NFЖ╨B and TNFЖ┴ cause a switch from MAT1A to MAT2A expression

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in human hepatocellular carcinoma (HCC), which facilitates cancer cell growth.

Stability

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

MAT1A Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 414 amino acids (1-395 a.a.) and having a molecular mass of 45.6 kDa. The MAT1A is fused to a 20 amino acid his tag at N-terminus and purified by conventional chromatography.

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