

## MAT1A Human

**Description:** 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.

Catalog #:ENPS-500

For research use only.

**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.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHS SGLVPRGSHM NGPVDGLCDH SLSEGVFMFT  
SESVGEGHPD KICDQISDAV LDAHLKQDPN AKVACETVCK TGMVLLCGEI TSMAMVDYQR  
VVRDTIKHIG YDDSAKGDFD KTCNVLVALE QQSPDIAQCV HLDNRNEEDVG AGDQGLMFGY  
ATDETEECMP LTIILAHKLN ARMADLRRSG LLPWLRPDSK TQVTVQYMQD NGAVIPVRIH  
TIVISVQHNE DI

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

### Formulation:

The MAT1A protein solution contains 20mM Tris-HCl pH-8, 1mM DTT, 100mM NaCl and 10% glycerol.

### 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.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

MAT1A catalyzes a two-step reaction that involves the transfer of the adenosyl moiety of ATP to methionine to form S-adenosylmethionine and triphosphosphate, 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, NFB and TNF cause a switch from MAT1A to MAT2A expression in human hepatocellular carcinoma (HCC), which facilitates cancer cell growth.

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