

## 32-2521: MAT1A Recombinant Protein

**Alternative Name :** 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.

### Description

Source : Escherichia Coli. 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. 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 P<sub>PPi</sub> and P<sub>i</sub>. 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, NF KappaB and TNF alpha cause a switch from MAT1A to MAT2A expression in human hepatocellular carcinoma (HCC), which facilitates cancer cell growth.

### Product Info

**Amount :** 10 µg  
**Purification :** Greater than 95.0% as determined by SDS-PAGE.  
**Content :** The MAT1A protein solution contains 20mM Tris-HCl pH-8, 1mM DTT, 100mM NaCl and 10% glycerol.  
**Storage condition :** 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.  
**Amino Acid :** MGSSHHHHHS SGLVPRGSHM NGPVDGLCDH SLSEGVFMFT SESVGEGHPD KICDQISDAV  
LDAHLKQDPN AKVACETVCK TGMVLLCGEI TSMAMVDYQR VVRDTIKHIG YDDSAKGFDF KTCNVLVALE  
QQSPDIAQCV HLDNRNEEDVG 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.

