Creative Enzymes
Diagnostic Enzymes

S-adenosylmethionine synthetase, Recombinant

Product Information

Cat#	NATE-1151
Abbr	MAT, Recombinant
Alias	MAT
Similar	MAT
Description	S-adenosylmethionine synthetase (EC 2.5.1.6) (also known as methionine adenosyltransferase (MAT)) is an enzyme that creates S-adenosylmethionine (AdoMet) by reacting methionine (a non-polar amino acid) and ATP (the basic currency of energy). AdoMet is a methyl donor for transmethylation. It gives away its methyl group and is also the propylamino donor in polyamine biosynthesis. S-adenosylmethionine synthetasecan be considered the rate-limiting step of the methionine cycle.
Appearance	White powder, lyophilized
Product Overview	S-adenosylmethionine (SAM) is a methyl donor and allows DNA methylation. Once DNA is methylated, it switches the genes off and therefore, S-adenosylmethionine can be considered tocontrol gene expression. SAM is also involved in gene transcription, cell proliferation, and production ofsecondary metabolites. Hence SAM synthetase is fast becoming a drug target, inparticular for the following diseases: depression, dementia, vacuolar myelopathy, liver injury, migraine, osteoarthritis, and as a potential cancer chemopreventive agent.
Form	Freeze dried powder
Enzyme Commission Number	EC 2.5.1.6
Activity	>700U/mg
Molecular Weight	About 46kDa (SDS-PAGE detection)
Purity	>90% (SDS-PAGE test)

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Isoelectric point	4.7
pH Stability	7.0-9.5
Storage	Redissolved in 30% glycerol, 4°C, store at -20°C/-80°C for long-term preservation, Avoid multiple freeze-thaw cycles.
Buffer	Tris buffer, pH8.0
Synonyms	EC 2.5.1.6; MAT; MATA1; SAMS; SAMS1; Methionine adenosyltransferase 1; S-adenosylmethioninesynthase isoform type-1; AdoMet synthase 1; MAT 1; Methionineadenosyltransferase I/III; MAT-I/III; MAT1A; AMS1

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