

S-Adenosylmethionine Synthetase (MAT)

Cat: M7490

Specification: 100mg

Storage: Can be stored for at least one year at -20°C, and for an even longer duration at -80°C.

Product Information

Enzymatic Number: EC 2.5.1.6

Source: Microbial Recombinant Protein

Isoelectric Point: 4.7

Molecular Weight: 46KDa (Detected by SDS-PAGE)

Purity: ≥95% (Detected by SDS-PAGE)

pH Stability: Stable within a pH range of 7.0-9.5.

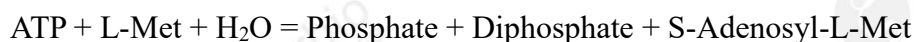
Enzyme Activity Definition: One unit of enzyme activity is defined as the amount of enzyme required to produce 1 micromole of S-adenosylmethionine per minute at 37°C and pH 8.0.

Reconstitution: The product can be reconstituted in pure water containing 30% glycerol. It can be stored for approximately one year at 4°C. For longer storage, aliquot the reconstituted solution and store at -20°C. Avoid repeated freeze-thaw cycles as much as possible.

Introduction

S-Adenosylmethionine Synthetase, also known as Methionine Adenosyltransferase, is an enzyme involved in the synthesis of S-Adenosylmethionine (SAM). SAM, carrying an activated methyl group, serves as a crucial cofactor in methyl transfer reactions occurring within all eukaryotic cells. It is synthesized within cells from adenosine triphosphate (ATP) and methionine through the catalytic action of methionine adenosyltransferase (MAT). During its role as a cofactor in methyl transfer reactions, SAM loses a methyl group, transforming into S-adenosylhomocysteine. The majority of SAM is produced in the liver, where it plays a pivotal role in transmethylation reactions due to its "active methyl" group.

The reaction catalyzed by S-Adenosylmethionine Synthetase can be summarized as follows:



Safety Note: This reagent is intended solely for research or production purposes and is strictly prohibited from use in human or animal experiments.