

Product Data Sheet

□ Cat # RP-406 Recombinant Human S-Adenosylmethionine Decarboxylase **Size:** □ 10 ug

Adenosylmethionine decarboxylase (EC 1.1.1.50) is an enzyme that catalyzes the conversion of S-adenosyl methionine to S-adenosylmethioninamine. Polyamines such as spermidine and spermine are essential for cellular growth under most conditions, being implicated in a large number of cellular processes including DNA, RNA and protein synthesis. S-adenosylmethionine decarboxylase (AdoMetDC) plays an essential regulatory role in the polyamine biosynthetic pathway by generating the n-propylamine residue required for the synthesis of spermidine and spermine from putrescein. Unlike many amino acid decarboxylases AdoMetDC uses a covalently bound pyruvate residue as a cofactor rather than the more common pyridoxal 5'-phosphate. These proteins can be divided into two main groups which show little sequence similarity either to each other, or to other pyruvoyl-dependent amino acid decarboxylases: class I enzymes found in bacteria and archaea, and class II enzymes found in eukaryotes. In both groups the active enzyme is generated by the post-translational autocatalytic cleavage of a precursor protein. This cleavage generates the pyruvate precursor from an internal serine residue and results in the formation of two non-identical subunits termed alpha and beta which form the active enzyme.

Storage and Stability: S-Adenosylmethionine Decarboxylase although stable at 14°C for 1 week, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). **Please prevent freeze-thaw cycles.** If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

This item is for LABORATORY RESEARCH USE ONLY.

References: van Poelje PD (1990) Ann. Rev. Biochem. 59, 29-59; Pegg AE (1998) Biochem. Soc. Trans. 26, 580-586

MATA2, MATII, SAMS2, MAT-2A, S-adenosylmethionine synthetase isoform type-2, AdoMet synthetase 2, Methionine adenosyltransferase 2, Methionine adenosyltransferase II, MAT2A, AMS2.

Source

RP-406 120308A

S-Adenosylmethionine Decarboxylase Human Recombinant produced in E.Coli is a non-glycosylated, polypeptide chain containing amino acids 334 aa (~38 kda, purity >95%). AMD1 contains His-tag at N-terminus. It is supplied in 20mM Tris, pH 8.0, and 10% glycerol. (see lot sp. conc on the vial)

Suggested Applications: • ELISA • MS • Inhibition Assays • Western Blotting

Users must optimize the appropriate concentration and conditions for each assay.

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