

Catalog # 10-2454

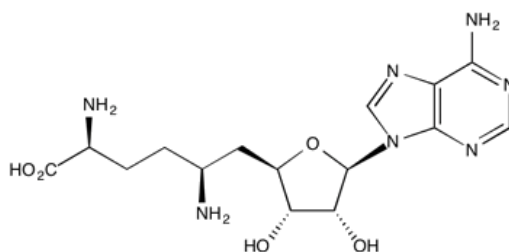
Sinefungin

CAS# 58944-73-3

5'-Deoxy-5'-(1,4-diamino-4-carboxybutyl)adenosine

A-9145; Adenosylornithine; Antibiotic 32232RP

Lot # X106528



Nucleoside S-adenosyl-1-methionine analog. Potent, competitive methyltransferase (protein, DNA, and RNA methyltransferases) inhibitor.^{1,2} $IC_{50} < 1.0$ and $2.5 \mu M$ for PRMT1 and SET7/9, respectively.³ Binds with greater affinity to the adenine-specific DNA methyltransferase M.TaqI than S-adenosyl-L-homocysteine.⁴ Inhibits biofilm formation by *Streptococcus pneumoniae*.⁵

- 1) Barbes *et al.* (1990), *Effects of sinefungin and S-adenosylhomocysteine on DNA and protein methyltransferases from Streptomyces and other bacteria*; FEMS Microbiol. Lett., **57** 239
- 2) Yebra *et al.* (1991), *The effect of sinefungin and synthetic analogues on RNA and DNA methyltransferases from Streptomyces*; J. Antibiot. (Tokyo), **44** 1141
- 3) Cheng *et al.* (2004), *Small molecule regulators of protein arginine methyltransferases*; J. Biol. Chem., **279** 23892
- 4) Schluckebier *et al.* (1997), *Differential binding of S-adenosylmethionine S-adenosylhomocysteine and Sinefungin to adenine-specific DNA methyltransferase M. TaqI*; J. Mol. Biol., **265** 56
- 5) Yadav *et al.* (2014), *Sinefungin, a natural nucleoside analogue of S-adenosylmethionine, inhibits Streptococcus pneumoniae biofilm growth*; Biomed. Res. Int., **2014** 156987

PHYSICAL DATA

Molecular Weight:	381.39
Molecular Formula:	C ₁₅ H ₂₃ N ₇ O ₅
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	Water (up to 20 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in Distilled water may be stored at -20°C for up to 1 month.

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