SAH

Cat. No.: HY-19528

CAS No.: 979-92-0

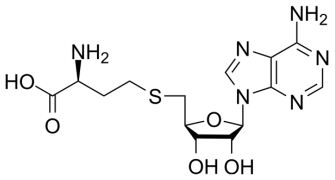
Molecular Formula: $C_{14}H_{20}N_6O_5S$

Molecular Weight: 384.41

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: -20°C, protect from light
* In solvent : -80°C, 1 year; -20°C, 6 months (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (162.59 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6014 mL	13.0069 mL	26.0139 mL
	5 mM	0.5203 mL	2.6014 mL	5.2028 mL
	10 mM	0.2601 mL	1.3007 mL	2.6014 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SAH (S-Adenosylhomocysteine) is an amino acid derivative and a modulartor in several metabolic pathways. It is an intermediate in the synthesis of cysteine and adenosine[1]. SAH is an inhibitor for METTL3-METTL14 heterodimer complex (METTL3-14) with an IC_{50} of 0.9 μM[2].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

SAH (10^{-7}-10^{-5} M) activates norepinephrine (NE) and serotonin (5-HT) in vitro uptake in synaptosomal preparations from rat brain, but does not affect dopamine (DA) uptake[1].
SAH (0.1-10 μM) shows strong inhibitory effects on METTL3-14 activity with an IC_{50} value of 0.9 μM in Kinetic parameter

	determination of the METTL3-14 complex[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	SAH (administered i.v., i.p. or p.o. in 1-10 mg/kg) is sleep-inductive and anticonvulsant with rabbit, rat and cat[1]. SAH (intraperitoneal injection; 7 mg/kg; 1 h prior to sacrifice) induces in vitro uptake increase for NE and 5-HT, significant only in brain stem and midbrain, but does not alter DA uptake[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Apoptosis. 2022 Jun;27(5-6):426-440.
- Mol Med. 2023 Jul 3;29(1):86.
- Int J Mol Sci. 2024 Jan 5, 25(2), 733.
- Bone. 2022 Jan;154:116182.
- Oncol Lett. 2021 Oct;22(4):711.

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REFERENCES

[1]. DE LA HABA G, et al. The enzymatic synthesis of S-adenosyl-L-homocysteine from adenosine and homocysteine. J Biol Chem. 1959 Mar;234(3):603-8.

[2]. Li F, et al. A Radioactivity-Based Assay for Screening Human m6A-RNA Methyltransferase, METTL3-METTL14 Complex, and Demethylase ALKBH5. Biomol Screen. 2016 Mar;21(3):290-7.

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