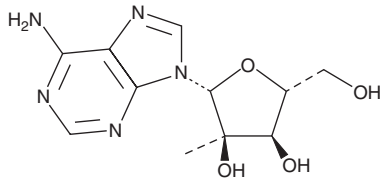
PRODUCT INFORMATION

2'-C-Methyladenosine

Item No. 23062

CAS Registry No.: 15397-12-3
Formal Name: 2'-C-methyl-adenosine
Synonym: 2-CMA
MF: $C_{11}H_{15}N_5O_4$
FW: 281.3
Purity: ≥98%
UV/Vis.: λ_{max}: 259 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2'-C-Methyladenosine is supplied as a crystalline solid. A stock solution may be made by dissolving the 2'-C-methyladenosine in the solvent of choice. 2'-C-Methyladenosine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 2'-C-methyladenosine in these solvents is approximately 20 and 5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 2'-C-methyladenosine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 2'-C-methyladenosine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2'-C-Methyladenosine is an inhibitor of hepatitis C virus (HCV) replication (IC_{50} = 0.3 µM in Huh-7 human hepatoma cells) that is not cytotoxic at concentrations up to 100 µM.[1] It is converted intracellularly to adenosine triphosphate, which inhibits the RNA-dependent RNA polymerase nonstructural protein 5B (NS5B). It also inhibits growth of *L. guyanensis in vitro* (EC_{50} = 3 µM) and eradicates it when used at a concentration of 10 µM.[2]

References

1. Carroll, S.S., Tomassini, J.E., Bosserman, M., *et al.* Inhibition of hepatitis C virus RNA replication by 2'-modified nucleoside analogs. *J. Biol. Chem.* **278(14)**, 11979-11984 (2003).
2. Robinson, J.I. and Beverley, S.M. Concentration of 2'C-methyladenosine triphosphate by *Leishmania guyanensis* enables specific inhibition of *Leishmania* RNA virus 1 by its RNA polymerase. *J. Biol. Chem.* (2018).

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