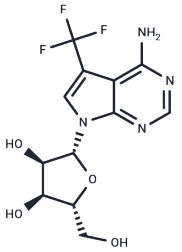
Data Sheet (Cat.No.T67753)

TargetMol
YOUR TARGET MOLECULES

Trifluoromethyl-tubercidin

Chemical Properties



CAS No. : 1854086-05-7

Formula: C12H13F3N4O4

Molecular Weight: 334.25

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Trifluoromethyl-tubercidin (TFMT) inhibits host MTr1 and suppresses virus replication. TFMT inhibits MTr1 through interaction at its S-adenosyl-l-methionine binding pocket to restrict influenza virus replication. TFMT was effective in inhibiting viral replication in mice, displayed little toxicity.
Targets(IC50)	Influenza Virus
In vitro	The median inhibitory concentration (IC50) for trifluoromethyl-tubercidin against IAV infection was 0.30 μM, and no notable in vitro toxicity was observed in the range of effective concentrations, as measured with water-soluble tetrazolium (WST)-8 cell viability assay. Trifluoromethyl-tubercidin treatment also greatly inhibited IAV replication when administered 3 to 4 hours after infection. Trifluoromethyl-tubercidin showed inhibitory activity in the IAV-infected mouse cell line LA-4, albeit with lower potency (IC50 = 7.7 μM) than in human cells[1].
In vivo	Trifluoromethyl-tubercidin treatment at 2 days after infection with IAV. At this point, NP and PB2 mRNA levels were significantly reduced by trifluoromethyl-tubercidin treatment in mouse lungs, indicating that the trifluoromethyl substitution of tubercidin reduces in vivo toxicity to levels we could not detect, but retains anti-IAV efficacy[1].

Solubility Information

Solubility	DMSO: 3.34 mg/mL (10 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9918 mL	14.9589 mL	29.9177 mL
5 mM	0.5984 mL	2.9918 mL	5.9835 mL
10 mM	0.2992 mL	1.4959 mL	2.9918 mL
50 mM	0.0598 mL	0.2992 mL	0.5984 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Tsukamoto Y, et al. Inhibition of cellular RNA methyltransferase abrogates influenza virus capping and replication. Science. 2023 Feb 10;379(6632):586-591.