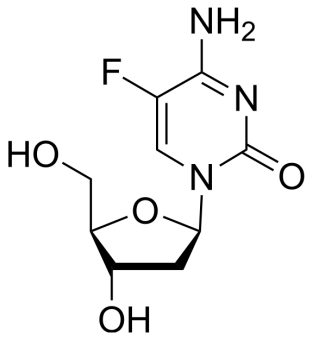
5-Fluoro-2'-deoxycytidine

Cat. No.:	HY-116217
CAS No.:	10356-76-0
Molecular Formula:	$C_9H_{12}FN_3O_4$
Molecular Weight:	245.21
Target:	DNA Methyltransferase
Pathway:	Epigenetics
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (203.91 mM; Need ultrasonic)
H_2O : 16.67 mg/mL (67.98 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.0781 mL	20.3907 mL	40.7814 mL
5 mM	0.8156 mL	4.0781 mL	8.1563 mL
10 mM	0.4078 mL	2.0391 mL	4.0781 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: ≥ 2.5 mg/mL (10.20 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.20 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

5-Fluoro-2'-deoxycytidine, a fluoropyrimidine nucleoside analogue, is a DNA methyltransferase (DNMT) inhibitor. 5-Fluoro-2'-deoxycytidine is a tumor-selective proagent of the potent thymidylate synthase inhibitor 5-fluoro-2'-dUMP[1][2].

IC_{50} & Target

DNA methyltransferase (DNMT)[1]

REFERENCES

[1]. Beumer JH, et, al. Pharmacokinetics, metabolism, and oral bioavailability of the DNA methyltransferase inhibitor 5-fluoro-2'-deoxycytidine in mice. Clin Cancer Res. 2006 Dec 15;12(24):7483-91.

[2]. Osterman DG, et, al. 5-Fluorocytosine in DNA is a mechanism-based inhibitor of HhaI methylase. Biochemistry. 1988 Jul 12;27(14):5204-10.

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