2-Fluoroadenine

Cat. No.: HY-W008469

CAS No.: 700-49-2

Molecular Formula: $C_5H_4FN_5$

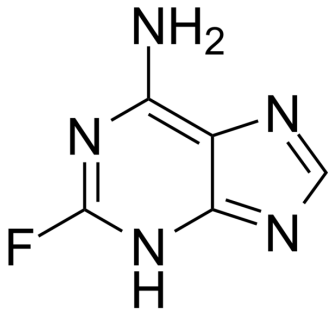
Molecular Weight: 153.12

Target: DNA/RNA Synthesis

Pathway: Cell Cycle/DNA Damage

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20.83 mg/mL (136.04 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.5308 mL	32.6541 mL	65.3083 mL
	5 mM	1.3062 mL	6.5308 mL	13.0617 mL
	10 mM	0.6531 mL	3.2654 mL	6.5308 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 (13.58 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (13.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Fluoroadenine is a toxic purine bases. 2-Fluoroadenine has toxicity in nonproliferating and proliferating tumor cells. 2-Fluoroadenine can be used for researching anticancer[1].

IC_{50} & Target

DNA/RNA synthesis[1]

In Vitro

2-Fluoroadenine (2 μM; 4 hours) inhibits CEM cell growth by targeting one or more enzymes involved in either RNA or protein synthesis[1].

2-Fluoroadenine (0-1000 μM; 96 hours) exhibits cytotoxicity in nonproliferating MRC-5 cells[1].

2-Fluoroadenine (0.22, 2.2 and 22 μM; 30 hours) inhibits protein, RNA, and DNA syntheses in Balb-3T3 cells incubated in serum-free medium[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay	
Cell Line:	CEM cells[1]
Concentration:	2 μM
Incubation Time:	4 hours
Result:	Inhibited CEM cell growth by targeting one or more enzymes involved in either RNA or protein synthesis.

Cell Cytotoxicity Assay	
Cell Line:	MRC-5 cells[1]
Concentration:	0-1000 μM
Incubation Time:	4 hours
Result:	Exhibited cytotoxicity in nonproliferating MRC-5 cells.

REFERENCES

[1]. Parker WB, et al. Metabolism and metabolic actions of 6-methylpurine and 2-fluoroadenine in human cells. Biochem Pharmacol. 1998;55(10):1673-1681.

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