Fludarabine triphosphate trisodium

Cat. No.: HY-136650A

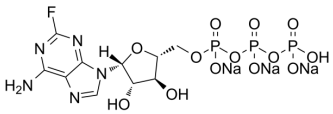
Molecular Formula: $C_{10}H_{12}FN_5Na_3O_{13}P_3$

Molecular Weight: 591.12

Target: Drug Metabolite; Nucleoside Antimetabolite/Analog; DNA/RNA Synthesis; Apoptosis

Pathway: Metabolic Enzyme/Protease; Cell Cycle/DNA Damage; Apoptosis

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



SOLVENT & SOLUBILITY

In Vitro

H_2O : 125 mg/mL (211.46 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6917 mL	8.4585 mL	16.9170 mL
	5 mM	0.3383 mL	1.6917 mL	3.3834 mL
	10 mM	0.1692 mL	0.8459 mL	1.6917 mL

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

BIOLOGICAL ACTIVITY

Description

Fludarabine triphosphate (F-ara-ATP) trisodium, the active metabolite of Fludarabine (HY-B0069), is a potent, noncompetitive and specific inhibitor of DNA primase, with an IC_{50} of 2.3 μM and a K_i of 6.1 μM. Fludarabine triphosphate trisodium inhibits DNA synthesis by blocking DNA primase and primer RNA formation. Fludarabine triphosphate trisodium inhibits ribonucleotide reductase and DNA polymerase and ultimately leads to cellular apoptosis[1][2].

IC_{50} & Target

IC50: 2.3 ± 0.3 μM (DNA primase); Ki: 6.1 ± 0.3 μM (DNA primase)[1]

In Vitro

Fludarabine triphosphate trisodium is a more potent inhibitor of the polydeoxythymidylate primase activity than of the DNA polymerase α/δ activities present in the supernatants of CCRF-CEM cells[1].
Fludarabine triphosphate trisodium (10-50 μM) inhibits the incorporation of ATP into primer RNA and dTTP into DNA to a similar extent[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Catapano CV, et al. Inhibition of primer RNA formation in CCRF-CEM leukemia cells by fludarabine triphosphate. Cancer Res. 1991 Apr 1;51(7):1829-35.

[2]. Woodahl EL, et al. A novel phenotypic method to determine fludarabine triphosphate accumulation in T-lymphocytes from hematopoietic cell transplantation patients. Cancer Chemother Pharmacol. 2009 Feb;63(3):391-401.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA