Fosifloxuridine nafalbenamide

Cat. No.: HY-109115

CAS No.: 1332837-31-6

Molecular Formula: $C_{29}H_{29}FN_3O_9P$

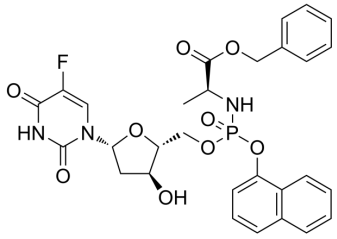
Molecular Weight: 613.53

Target: Thymidylate Synthase

Pathway: Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (162.99 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6299 mL	8.1496 mL	16.2991 mL
	5 mM	0.3260 mL	1.6299 mL	3.2598 mL
	10 mM	0.1630 mL	0.8150 mL	1.6299 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 (4.07 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.07 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Fosifloxuridine nafalbenamide (NUC-3373), a pyrimidine nucleotide analogue, is a Thymidylate synthase inhibitor. Fosifloxuridine nafalbenamide has anticancer activity. Fosifloxuridine nafalbenamide has the potential to evoke a host immune response and enhance immunoresearch[1][2].

In Vitro

Fosifloxuridine nafalbenamide induces the release of damage-associated molecular patterns (DAMPs), with increased expression of calreticulin (CRT) at the cell surface and concomitant loss of nuclear nuclear high mobility group box protein 1 (HMGB1)[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Fosifloxuridine nafalbenamide exhibits anti-cancer activity in HT-29 nude mouse xenograft models[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Fiona G. McKissock, et al. Abstract 1848: NUC-3373 induces ER stress and the release of damage associated molecular patterns in colorectal cancer cells. Cancer Res August 15 2020 (80) (16 Supplement) 1848.

[2]. Essam A. Ghazaly, et al. Abstract B46: NUC-3373: A novel pyrimidine nucleotide analogue that overcomes key cancer drug resistance limiting patient survival. Mol Cancer Ther December 1 2015 (14) (12 Supplement 2) B46.

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