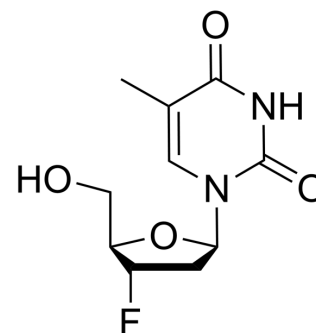


Alovudine

Cat. No.:	HY-B1516		
CAS No.:	25526-93-6		
Molecular Formula:	C ₁₀ H ₁₃ FN ₂ O ₄		
Molecular Weight:	244.22		
Target:	DNA/RNA Synthesis; Orthopoxvirus		
Pathway:	Cell Cycle/DNA Damage; Anti-infection		
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 (409.47 mM; Need ultrasonic)
 H₂O : ≥ 25 mg/mL (102.37 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.0947 mL	20.4733 mL	40.9467 mL
	5 mM	0.8189 mL	4.0947 mL	8.1893 mL
	10 mM	0.4095 mL	2.0473 mL	4.0947 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (8.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (8.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (8.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Alovudine (3'-Fluoro-3'-deoxythymidine) is a marker of DNA synthesis that is less susceptible to inflammatory changes than ¹⁸F-Fluorodeoxyglucose (FDG) and thus is a better biomarker in pancreatic cancer. Alovudine shows anti-orthopoxvirus activity^{[1][2]}.

REFERENCES

[1]. Smee DF, et al. A review of compounds exhibiting anti-orthopoxvirus activity in animal models. Antiviral Res. 2003 Jan;57(1-2):41-52.

[2]. Challapalli A, et al. 3'-Deoxy-3'-¹⁸F-fluorothymidine positron emission tomography as an early predictor of disease progression in patients with advanced and metastatic pancreatic cancer. Eur J Nucl Med Mol Imaging. 2015 May;42(6):831-40.

Caution: Product has not been fully validated for medical applications. For research use only.

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