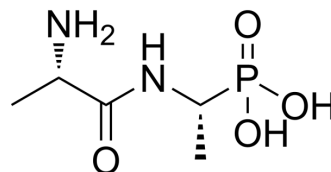


Alafosfalin

Cat. No.:	HY-119881
CAS No.:	60668-24-8
Molecular Formula:	C ₅ H ₁₃ N ₂ O ₄ P
Molecular Weight:	196.14
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 250 mg/mL (1274.60 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	5.0984 mL	25.4920 mL	50.9840 mL
		5 mM	1.0197 mL	5.0984 mL	10.1968 mL
	10 mM	0.5098 mL	2.5492 mL	5.0984 mL	
Please refer to the solubility information to select the appropriate solvent.					

BIOLOGICAL ACTIVITY

Description	Alafosfalin is an inhibitor of cell wall biosynthesis. Alafosfalin is a phosphonodipeptide with antibacterial properties ^[1] .	
IC₅₀ & Target	β-lactam	
In Vitro	Alafosfalin is highly active against Escherichia coli and moderately active against Serratia, Klebsiella, Enterobacter, and Citrobacter, but less active against gram-positive organisms than were beta-lactams such as cephalosporins or ampicillin and inactive against indole-positive Proteus, Pseudomonas, and Acinetobacter ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	After s.c. administration to rats, Alafosfalin is rapidly absorbed with half-lives (t _{1/2}) of approximately 20 minutes ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Pairs of male SpragueDawley rats (250 to 350 g) ^[2]
	Dosage:	20, 100, and 500 mg/ kg (single doses) or 800 mg/kg per day for 14 days (Pharmacokinetic Analysis)

Administration:	Administered by s.c.
Result:	Rapidly absorbed; peak concentrations were found within 20 minutes of dosing with half-lives of approximately 20 minutes.

REFERENCES

- [1]. H B Maruyama, et al. Alafosfalin, a New Inhibitor of Cell Wall Biosynthesis: In Vitro Activity Against Urinary Isolates in Japan and Potentiation With Beta-Lactams. *Antimicrob Agents Chemother.* 1979 Oct;16(4):444-51.
- [2]. J G Allen, et al. Phosphonopeptides as Antibacterial Agents: Metabolism and Pharmacokinetics of Alafosfalin in Animals and Humans. *Antimicrob Agents Chemother.* 1979 Sep;16(3):306-13.

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

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