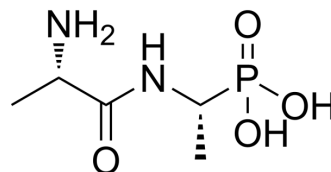


Alafosfalin

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:	Please store the product under the recommended conditions in the Certificate of Analysis.



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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