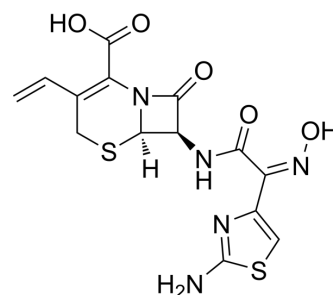


Cefdinir

Cat. No.:	HY-B0136		
CAS No.:	91832-40-5		
Molecular Formula:	C ₁₄ H ₁₃ N ₅ O ₅ S ₂		
Molecular Weight:	395.41		
Target:	Bacterial; Antibiotic		
Pathway:	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 : 33.33 mg/mL (84.29 mM; Need ultrasonic)					
		Solvent	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	Concentration				
		1 mM		2.5290 mL	12.6451 mL	25.2902 mL
5 mM			0.5058 mL	2.5290 mL	5.0580 mL	
		10 mM	0.2529 mL	1.2645 mL	2.5290 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.32 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.32 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.32 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Cefdinir (FK-482) is a semi-synthetic, broad-spectrum antibiotic in the third generation of the cephalosporin class, which is proved to be effective for infections caused by several Gram-negative and Gram-positive bacteria. Cefdinir can be used for the research of common bacterial infections of the ear, sinus, throat, and skin ^{[1][2]} .
IC₅₀ & Target	β-lactam
In Vitro	Cefdinir (FK-482) is a third generation oral cephalosporin antibiotic. Cefdinir (Omnicef) is a semi-synthetic, broad-spectrum

antibiotic in the third generation of the cephalosporin class, which is proved to be effective for common bacterial infections of the ear, sinus, throat, and skin. It can be used to treat infections caused by several Gram-negative and Gram-positive bacteria. It is available in US as Omnicef by Abbott Laboratories and in India as Cednir by Abbott, Kefnir by Glenmark and Cefdiel by Ranbaxy. As of 2008, cefdinir was the highest-selling cephalosporin antibiotic in the United States, with more than US\$585 million in retail sales of its generic versions alone^[1]. Cefdinir (FK-482), a new oral 2-amino-5-thiazolyl cephalosporin, inhibited the luminol-amplified chemiluminescence (LACL) response of human neutrophils stimulated by PMA but not opsonized zymosan, in a concentration-dependent but not time-dependent manner. The LACL response to opsonized zymosan in cytochalasin B-treated neutrophils was, however, inhibited by cefdinir. Furthermore, cefdinir inhibited LACL generation in cell-free systems consisting of H₂O₂, Nal, and either horseradish peroxidase or a myeloperoxidase-containing neutrophil extract. Orthodianisidine oxidation in these two acellular systems was inhibited by cefdinir^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Microbiol. 2023 Mar;8(3):410-423.

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REFERENCES

[1]. Soejima R. Cefdinir. Jpn J Antibiot. 1992 Oct;45(10):1239-52.

[2]. Labro MT, et al. Cefdinir (CI-983), a new oral amino-2-thiazolyl cephalosporin, inhibits human neutrophil myeloperoxidase in the extracellular medium but not the phagolysosome. J Immunol. 1994 Mar 1;152(5):2447-55.

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

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