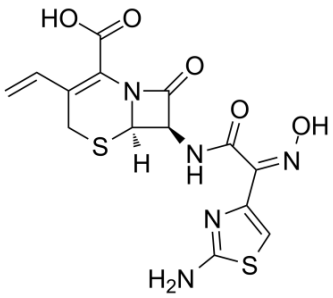
Cefdinir

Cat. No.:	HY-B0136
CAS No.:	91832-40-5
Molecular Formula:	$C_{14}H_{13}N_5O_5S_2$
Molecular Weight:	395.41
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (84.29 mM; Need ultrasonic)

H_2O : 0.67 mg/mL (1.69 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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

1. 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
2. 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
3. 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].

IC_{50} & Target

Antibacterial[1].

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 H_2O_2, NaI, 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.

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.

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