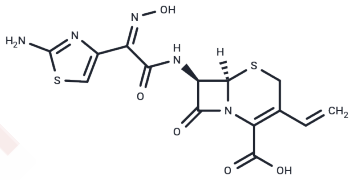
Data Sheet (Cat.No.T0133)

TargetMol

Cefdinir

Chemical Properties



CAS No. :	91832-40-5
Formula:	C14H13N5O5S2
Molecular Weight:	395.41
Appearance:	no data available
Storage:	store at low temperature Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Cefdinir (FK-482) is a third-generation, semi-synthetic cephalosporin antibiotic effective against common bacterial infections of the ear, sinus, throat, and skin.
Targets(IC50)	Glutathione Peroxidase,Antibacterial,Antibiotic
In vitro	Cefdinir, a new oral 2-amino-5-thiazolyl cephalosporin, inhibits 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. Cefdinir inhibits LACL generation in cell-free systems consisting of Water2, NaI, and either horseradish peroxidase or amyeloperoxidase-containing neutrophil extract. Cefdinir impairs LACL response induced by the calcium ionophore A23187 and FMLP, and this impairment is increased in cytochalasin B-treated neutrophils. Cefdinir directly inhibits the activity of myeloperoxidase-containing neutrophil extract released into the extracellular medium during neutrophil stimulation by soluble mediators, but has no effect on that released into the phagolysosome during phagocytosis. [1] Cefdinir demonstrates excellent activity against a wide range of gram-positive and gram-negative bacteria. Cefdinir is resistant to a broad variety of β-lactamases and exhibits a β-lactam stability profile generally better than those observed with cefaclor and cefuroxime. Cefdinir elimination is primarily mediated by the kidney. Cefdinir interacts with the dipeptide transporters PEPT1 and PEPT2. Cefdinir tubular reabsorption is substantial, that Cefdinir tubular secretion is inhibitable by probenecid, and that this secretion is probably mediated by the renal organic anion secretory pathway. [2]
Kinase Assay	Topoisomerase II activity assay: Nuclear extracts are prepared, and nuclei are isolated. The activity of topoisomerase II is calculated from the percentage of decatenation obtained. Tritiated kinoplast DNA (KDNA 0.22 μg) is used as a substrate. Etoposide and topoisomerase II are incubated for 30 min at 37 ℃ and are stopped with 1% sodium dodecyl sulfate (SDS) and proteinase K (100 μg/mL). The percentages of decatenation and inhibition of topoisomerase II by Etoposide are obtained.

Solubility Information

Solubility	DMSO: 40 mg/mL (101.16 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble),

(< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.529 mL	12.6451 mL	25.2902 mL
5 mM	0.5058 mL	2.529 mL	5.058 mL
10 mM	0.2529 mL	1.2645 mL	2.529 mL
50 mM	0.0506 mL	0.2529 mL	0.5058 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Labro MT, et al. J Immunol,1994, 152(5), 2447-2455.
Lepsy CS, et al. Antimicrob Agents Chemother,2003, 47(2), 689-696.