

## Product Specification Sheet

**Product Name:** Cefdinir

**Catalog Number:** C2333

### Technical information:

Chemical Formula:  $C_{14}H_{13}N_5O_5S_2$

CAS #: 91832-40-5

Molecular Weight: 395.41

Purity: > 98%

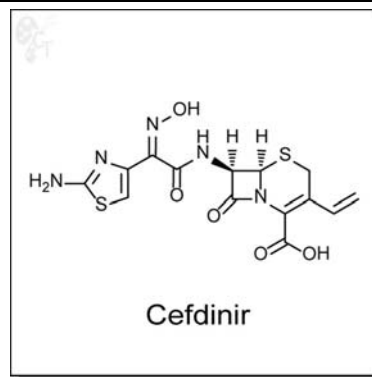
Appearance: white solid

Solubility: Soluble in DMSO up to 100 mM

Chemical Name: (6R,7R)-7-[(2Z)-2-(2-amino-1,3-thiazol-4-yl)-2-(N-hydroxyimino)acetamido]-3-ethenyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid

Storage: Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.



**Handling:**

- To make 10 mM stock solution, add 0.253mL of DMSO for each mg of Cefdinir.
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

**Biological Activity:** Cefdinir is an orally-available, b-lactam antibiotic that binds to penicillin-susceptible *Staphylococcus aureus* 2132 at an MIC of 25 nM (1) and *E. Coli* C11 at an MIC of 63 nM (ED50 of 1.32 mg/kg) (2). In contrast to other oral cephalosporins, cefdinir retains substantial activity against a panel of bacterial strains and is found to be extremely stable against numerous b-lactamases. Additionally, cefdinir inhibits the adherence of type-1 fimbriated *E. coli* to uroepithelial cells. (3)

In clinical studies, cefdinir has been shown to be superior to penicillin V and comparable to cephalexin and amoxicillin/clavulanate in the treatment of both pediatric and adult bacterial infections.

- Reference:**
1. Yamaguchi et al., In Vitro and In Vivo Antibacterial Activities of CS-834, a New Oral Carbapenem. *Antimicrob. Agents Chemother.* 1998, 42(3), 555-563 Pubmed ID: 9517932
  2. Fukuoka et al., Efficacy of CS-834 against Experimental Pneumonia Caused by Penicillin-Susceptible and -Resistant *Streptococcus pneumoniae* in Mice. *Antimicrob Agents Chemother.* 1998, 42(1), 23-27. Pubmed ID: 9449255
  3. Guay et al., Cefdinir: An Expanded-Spectrum Oral Cephalosporin. *Annals Pharmacother.* 2000, 34, 1469-1477. Pubmed ID: 11144705

To reorder: <http://www.cellagentech.com/Cefdinir/>

For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

*Chemicals are sold for research use only, not for clinical or diagnostic use.*