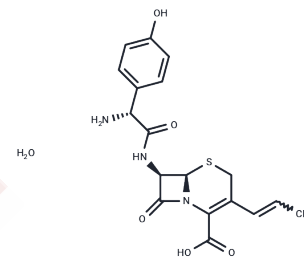


## Cefprozil monohydrate

## Chemical Properties

CAS No. :	121123-17-9
Formula:	C <sub>18</sub> H <sub>21</sub> N <sub>3</sub> O <sub>6</sub> S
Molecular Weight:	407.44
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Cefprozil monohydrate (Cefprozil) is a second-generation cephalosporin-type antibiotic.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Cefprozil is particularly active against the Gram-positive organisms Streptococcus pyogenes, pneumoniae and agalactiae and against methicillin-susceptible Staphylococcus aureus. Cefprozil is also moderately active against Haemophilus influenzae, Moraxella catarrhalis, Neisseria gonorrhoeae, many Enterobacteriaceae and certain anaerobic organisms, and is relatively stable to hydrolysis by a number of beta-lactamases. [1] Cefprozil is a newer oral Cephalosporin with a spectrum of activity against organisms that include gram-positive and gram-negative pathogens. Cefprozil is active (susceptibility, less than or equal to 8 mg /mL; moderate susceptibility, 16 mg/mL; resistance, greater than or equal to 32 mg/mL) against gram-positive species such as streptococci, methicillin-susceptible staphylococci, and Listeria monocytogenes. [2] Cefprozil is at least as active as cefuroxime, cefaclor, and cephalixin against all organisms tested, but is fourfold less active than doxycycline against E coli and 16-fold less active than clarithromycin versus S pneumoniae. Cefprozil is as active as amoxicillin/clavulanate against K pneumoniae and E coli. [3]
In vivo	Cefprozil results in the mean peak concentration (Cmax) in infant dogs (21.2 mg/mL) and adult dogs (27.8 mg/mL). Cefprozil results in the areas under the concentration-time curve (AUC, in infant dogs: 121 mg.hr/mL, in adult dogs: 130 mg.hr/mL), half-lives (T 1/2, in infant dogs: 4.7 hours, in adult dogs: 4.7 hours) or urinary recovery rates (UR, in infant dogs: 36.3%, in adult dogs: 34.7%) between the 2 groups. [4]

## Solubility Information

Solubility	DMSO: 55 mg/mL (134.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.4543 mL	12.2717 mL	24.5435 mL
5 mM	0.4909 mL	2.4543 mL	4.9087 mL
10 mM	0.2454 mL	1.2272 mL	2.4543 mL
50 mM	0.0491 mL	0.2454 mL	0.4909 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Wiseman LR, et al. *Drugs*,1993, 45(2), 295-317.
- Thornsberry C, et al. *Clin Infect Dis*,1992, 14 Suppl 2, S189-194.
- Ritchie DJ, et al. *Clin Ther*,1993, 15(1), 107-113.
- Nakanomyo H, et al. *Jpn J Antibiot*,1992, 45(11), 1469-1473.

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