

Product Data Sheet

Product Name: Cefoxitin (sodium salt)

Cat. No.: GC16446

Chemical Properties

Cas. No. 33564-30-6

Chemical Name (6R,7S)-3-[[[(aminocarbonyl)oxy]methyl]-7-methoxy-8-oxo-7-[(2-thienylacetyl)amino]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, monosodium salt

SMILES O=C1[C@](NC(CC2=CC=CS2)=O)(OC)[C@]3([H])N1C(C([O-])=O)=C(COC(N)=O)CS3.[Na+]

Formula $C_{16}H_{16}N_3O_7S_2 \cdot Na$

M.Wt 449.4

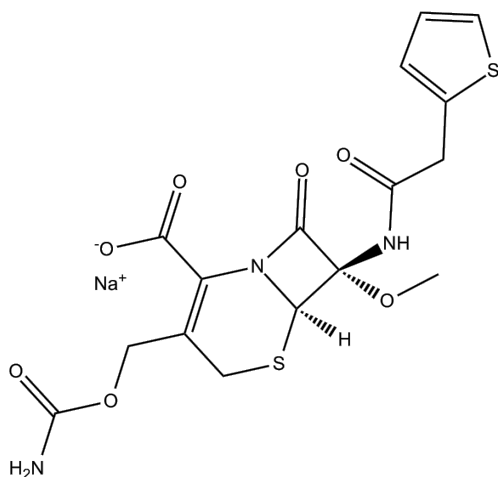
Solubility $\geq 12.9\text{mg/mL}$ in DMSO

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Cefoxitin (sodium salt) is a second generation cephalosporin antibiotic that was used to treat a wide range of gram-negative and gram-positive bacteria [1][2].

Cefoxitin, 3-carbamoyloxymethyl-7-a-methoxy-7- [2-(2-thienyl)acetamido]-3-cephem-4-carboxylic acid, is a semisynthetic cephamycin antibiotic with broad-spectrum activity. Cefoxitin is also active in vivo against a wide variety of bacteria including penicillin-resistant staphylococci and effective against gram-negative organisms including strains of indole-positive *Proteus* [1].

In mice, cefoxitin was more active against the cephalosporin-sensitive gram-negative bacteria, strains of *E.coli*, indole-producing *Proteus*, and *Serratia*, and the lactamase producing 2646. Cefoxitin was degraded by the lactamase of *E. cloacae* at a much slower rate than are the cephalosporins. In pharmacological studies, cefoxitin was found in sera and detected in urine samples in amounts greater than those of cephalothin and less than those of cephaloridine [1].

References:

- [1]. Miller AK, Celozzi E, Kong Y, et al. Cefoxitin, a semisynthetic cephamycin antibiotic: in vivo evaluation. *Antimicrob Agents Chemother.* 1974 Jan;5(1):33-7.
- [2]. Jacoby GA. AmpC beta-lactamases. *Clin Microbiol Rev.* 2009 Jan;22(1):161-82.

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