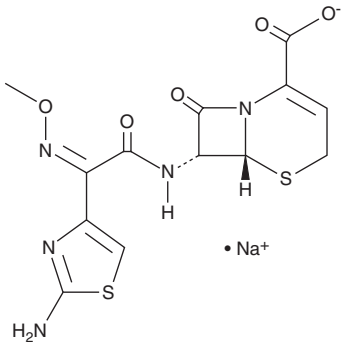
PRODUCT INFORMATION

Ceftizoxime (sodium salt)

Item No. 36093

CAS Registry No.:	68401-82-1
Formal Name:	7-[[(2Z)-2-(2-amino-4-thiazolyl)-2-(methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, monosodium salt
Synonyms:	FK-749, FR13479, SKF 88373
MF:	$C_{13}H_{12}N_5O_5S_2$ • Na
FW:	405.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 230 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ceftizoxime (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the ceftizoxime (sodium salt) in the solvent of choice, which should be purged with an inert gas. Ceftizoxime (sodium salt) is soluble in the organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of ceftizoxime (sodium salt) in DMSO is approximately 3 mg/ml. Ceftizoxime (sodium salt) is slightly soluble in DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ceftizoxime (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of ceftizoxime (sodium salt) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ceftizoxime is a cephalosporin antibiotic.[1] Ceftizoxime is active against clinical isolates of the Gram-positive bacteria *S. aureus*, *S. pyogenes*, and *S. epidermidis* (IC_{50}s = 1.56, ≤0.025, and 0.78 µg/ml, respectively), as well as clinical isolates of the Gram-negative bacteria *E. coli*, *K. pneumoniae*, and *P. mirabilis* (IC_{50}s = 0.1, ≤0.025, and ≤0.025 µg/ml, respectively). It is protective against *S. aureus*, *E. coli*, *P. mirabilis*, or *P. vulgaris* infection in mice (ED_{50}s = 4.03, 0.02, 0.255, and 0.038 mg/kg, respectively).[2] Formulations containing ceftizoxime have been used in the treatment of a variety of bacterial infections.

References

1. Kamimura, T., Matsumoto, Y., Okada, N., *et al*. Ceftizoxime (FK 749), a new parenteral cephalosporin: In vitro and in vivo antibacterial activities. *Antimicrob. Agents Chemother.* **16(5)**, 540-548 (1979).
2. Nishida, M., Kamimura, T., Okada, N., *et al*. Comparison of antibacterial activity of a new cephalosporin, ceftizoxime (FK 749) with other cephalosporin antibiotics. *J. Antibiot. (Tokyo)* **32(12)**, 1319-1327 (1979).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM