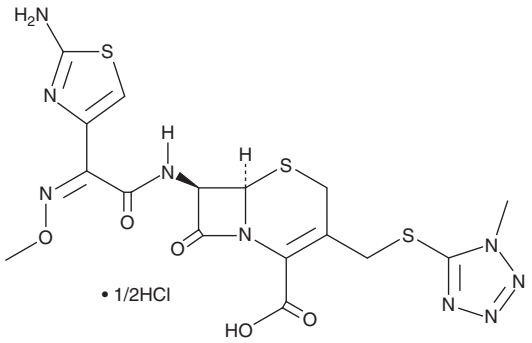
PRODUCT INFORMATION

Cefmenoxime (hydrochloride)

Item No. 26440

CAS Registry No.: 75738-58-8
Formal Name: (6R,7R)-7-[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, hemihydrochloride
Synonym: SCE-1365
MF: $C_{16}H_{17}N_9O_5S_3$ • 1/2HCl
FW: 529.8
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 262 nm
Supplied as: A crystalline 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

Cefmenoxime (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the cefmenoxime (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Cefmenoxime (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of cefmenoxime (hydrochloride) in these solvents is approximately 10 mg/ml.

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 cefmenoxime (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cefmenoxime (hydrochloride) in PBS, pH 7.2, is approximately 2.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Cefmenoxime is a broad-spectrum cephalosporin antibiotic.[1] It is active against clinical isolates of *S. aureus*, *S. epidermidis*, *S. pyogenes*, *E. coli*, *K. pneumoniae*, *P. mirabilis*, *P. vulgaris*, *P. morganii*, *S. marcescens*, and *E. cloacae in vitro* (MICs = 0.013-6.25 µg/ml). It is active against various Gram-positive and Gram-negative bacterial infections in mice (ED_{50}s = 0.016-66 mg/kg). It increases survival in a mouse model of *K. pneumoniae* infection with a 50% survival dose (SD_{50}) value of 7.6 mg/kg. Cefmenoxime is curative in a mouse model of *P. mirabilis* urinary tract infection with curative dose (CD_{50}) values ranging from 0.4 to 0.75 mg/kg. Formulations containing cefmenoxime have been used to treat various bacterial infections.

Reference

1. Tsuchiya, K., Kondo, M., Kida, M., *et al.* Cefmenoxime (SCE-1365), a novel broad-spectrum cephalosporin: In vitro and in vivo antibacterial activities. *Antimicrob. Agents Chemother.* **19(1)**, 56-65 (1981).

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