

PRODUCT INFORMATION



Cefazolin (sodium salt)

Item No. 15776

CAS Registry No.: 27164-46-1
Formal Name: (6R)-3-[[[(5-methyl-1,3,4-thiadiazol-2-yl)thio]methyl]-8-oxo-7R-[[2-(1H-tetrazol-1-yl)acetyl]amino]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, monosodium salt

Synonyms: NSC 291561, SKF 41558

MF: C₁₄H₁₃N₈O₄S₃ • Na

FW: 476.5

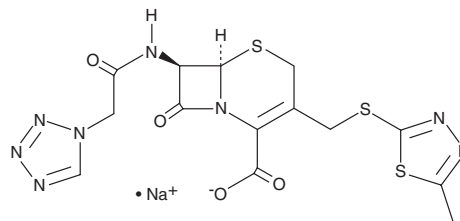
Purity: ≥98%

UV/Vis.: λ_{max}: 275 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

Cefazolin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the cefazolin (sodium salt) in the solvent of choice, which should be purged with an inert gas. Cefazolin (sodium salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of cefazolin (sodium salt) in these solvents is approximately 20 mg/ml, respectively.

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 cefazolin (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cefazolin (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Cefazolin is a broad-spectrum cephalosporin antibiotic that is active *in vitro* against various Gram-positive and Gram-negative bacteria (MICs = 0.2-12.5 µg/ml).¹ It also inhibits the growth of clinical isolates of *S. aureus*, *E. coli*, *P. mirabilis*, and *K. pneumoniae* (MICs = 0.1-25 µg/ml). *In vivo*, cefazolin protects against *S. aureus*, *E. coli*, and *P. mirabilis* infection in mice (ED₅₀s = <0.09-1.78, 0.44-3.63, and 2.31-5.2 mg/animal, respectively). Formulations containing cefazolin have been used to treat a variety of bacterial infections.

Reference

1. Nishida, M., Matsubara, T., Murakawa, T., *et al.* Cefazolin, a new semisynthetic cephalosporin antibiotic. II. *In vitro* and *in vivo* antimicrobial activity. *J. Antibiot. (Tokyo)* **23(3)**, 137-148 (1970).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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