

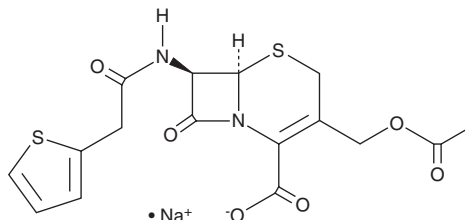
# PRODUCT INFORMATION



## Cefalothin (sodium salt)

Item No. 26063

**CAS Registry No.:** 58-71-9  
**Formal Name:** (6R)-3-[(acetyloxy)methyl]-8-oxo-7R-[[2-(2-thienyl)acetyl]amino]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, monosodium salt  
**MF:** C<sub>16</sub>H<sub>15</sub>N<sub>2</sub>O<sub>6</sub>S<sub>2</sub> • Na  
**FW:** 418.4  
**Purity:** ≥98%  
**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

Cefalothin (sodium salt) is supplied as a crystalline solid. Aqueous solutions of cefalothin (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cefalothin (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

Cefalothin is a  $\beta$ -lactam cephalosporin antibiotic.<sup>1,2</sup> It inhibits the growth of various Gram-positive and Gram-negative bacteria, including several strains of *S. pyogenes*, *S. aureus*, *C. tetani*, *N. gonorrhoeae*, *Salmonella*, and *Shigella* (MICs = 0.1-0.2, 0.312-0.625, 0.078, 1.25, 1.56-6.25, and 3.12-12.5  $\mu$ g/ml, respectively).<sup>1</sup> Cefalothin binds to *E. coli* penicillin-binding proteins (PBPs; IC<sub>50</sub>s = <0.25, 16, 37, and 1  $\mu$ g/ml for PBP1a, 1b, 2, and 3, respectively, in a radioligand binding assay), which interferes with bacterial morphogenesis.<sup>2</sup> It exhibits antibacterial activity in mouse models of infection with *S. pyogenes*, *D. pneumoniae*, and *S. aureus*.<sup>1</sup> Formulations containing cefalothin were previously used in the prophylaxis and treatment of bacterial infections.

### References

1. Boniece, W.S., Wick, W.E., Holmes, D.H., et al. In vitro and in vivo laboratory evaluation of cephalothin, a new broad spectrum antibiotic. *J. Bacteriol.* **84**, 1292-1296 (1962).
2. Curtis, N.A.C., Orr, D., Ross, G.W., et al. Affinities of penicillins and cephalosporins for the penicillin-binding proteins of *Escherichia coli* K-12 and their antibacterial activity. *Antimicrob. Agents Chemother.* **16**(5), 533-539 (1979).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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#### 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