

# PRODUCT INFORMATION

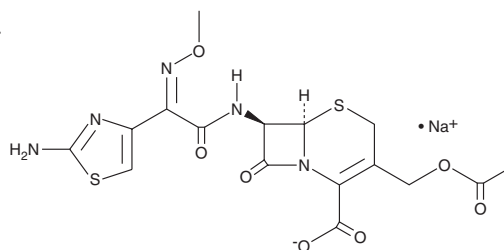


## Cefotaxime (sodium salt)

Item No. 16040

**CAS Registry No.:** 64485-93-4  
**Formal Name:** (6R)-3-[(acetyloxy)methyl]-7R-[[[(2Z)-2-(2-amino-4-thiazoly)-2-(methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, monosodium salt

**Synonym:** CTX  
**MF:** C<sub>16</sub>H<sub>16</sub>N<sub>5</sub>O<sub>7</sub>S<sub>2</sub> • Na  
**FW:** 477.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 236 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

Cefotaxime (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the cefotaxime (sodium salt) in the solvent of choice, which should be purged with an inert gas. Cefotaxime (sodium salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of cefotaxime (sodium salt) in these solvents is approximately 10 and 3 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 cefotaxime (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cefotaxime (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

Cefotaxime is a cephalosporin antibiotic with potent *in vitro* activity against streptococcal species, including *S. aureus* (IC<sub>50</sub> = 2 µg/ml) and penicillin-resistant *S. pneumoniae*.<sup>1</sup> It is also effective against a wide range of other β-lactamase-producing bacterial species (MIC<sub>90</sub>s = 0.01 - 130 µg/ml).<sup>1</sup> Cefotaxime acts by interfering with bacterial cell wall synthesis and has also been shown to be a competitive inhibitor of β-lactamase.<sup>2</sup>

### References

1. Neu, H.C. The *in vitro* activity, human pharmacology, and clinical effectiveness of new β-lactam antibiotics. *Annu. Rev. Pharmacol. Toxicol.* **22**, 599-642 (1982).
2. Jacoby, G.A. AmpC β-lactamases. *Clin. Microbiol. Rev.* **22**(1), 161-182 (2009).

#### 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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