

PRODUCT INFORMATION

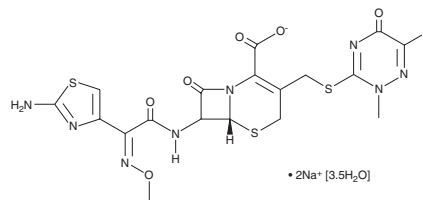


Ceftriaxone (sodium salt hydrate)

Item No. 18866

CAS Registry No.: 104376-79-6
Formal Name: (6R,7R)-7-[[[(2Z)-2-(2-amino-4-thiazolyl)-2-(methoxyimino)acetyl]amino]-8-oxo-3-[[[(1,2,5,6-tetrahydro-2-methyl-5,6-dioxo-1,2,4-triazin-3-yl)thio]methyl]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, disodium salt, hemiheptahydrate

Synonyms: Ro 13-9904
MF: C₁₈H₁₆N₈O₇S₃ • 2Na [3.5H₂O]
FW: 661.6
Purity: ≥98%
UV/Vis.: λ_{max}: 241 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

Ceftriaxone (sodium salt hydrate) is supplied as a crystalline solid. Ceftriaxone (sodium salt hydrate) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of ceftriaxone (sodium salt hydrate) be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ceftriaxone (sodium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ceftriaxone is a cephalosporin antibiotic.¹ It is selectively active against Gram-negative bacteria, including *N. gonorrhoea* and *S. pyogenes* (MICs = 0.01-0.025 and 0.012-0.25 µg/ml, respectively), over Gram-positive bacteria such as *S. epidermidis* and *S. aureus* (MICs = >25 µg/ml for both). Ceftriaxone inhibits *S. pyogenes* penicillin-binding protein 2 (PBP2) and PBP3 (IC₅₀s = 0.108 and 0.146 µg/ml, respectively).² Formulations containing ceftriaxone have been used in the treatment of various bacterial infections.

References

1. Neu, H.C., Meropol, N.J., and Fu, K.P. Antibacterial activity of ceftriaxone (Ro 13-9904), a β-lactamase-stable cephalosporin. *Antimicrob. Agents Chemother.* **19(3)**, 414-423 (1981).
2. Yan, S., Mendelman, P.M., and Stevens, D.L. The *in vitro* antibacterial activity of ceftriaxone against *Streptococcus pyogenes* is unrelated to penicillin-binding protein 4. *FEMS Microbiol. Lett.* **110(3)**, 313-317 (1993).

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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