



LKT Laboratories, Inc.

Ceftriaxone Disodium Hemiheptahydrate

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Product Information

Product ID C1637

CAS No. 104376-79-6

Chemical Name (6R,7R)-7-[[[(2Z)-(2-Amino-4-thiazolyl)(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

Synonym Ceftriaxone disodium salt hemiheptahydrate, Rocefin, Rocephine

Formula $C_{18}H_{16}N_8O_7S_3Na_2 \cdot 7/2H_2O$

Formula Wt. 661.60

Melting Point >155°C (dec.)

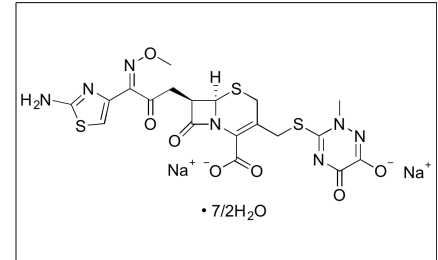
Purity ≥98%

Solubility Soluble in water (40 g/100 ml). DMSO 1 mg/mL.

Store Temp 4°C

Ship Temp Ambient

Description Ceftriaxone is a third generation β-lactam cephalosporin antibiotic. Ceftriaxone exhibits antibacterial efficacy against gram positive and gram negative bacteria, inhibiting penicillin binding protein activity to prevent peptidoglycan synthesis and bacterial cell wall formation. Ceftriaxone is also neuroprotective. This compound displays cognition enhancing benefit, suppressing traumatic brain injury-induced brain edema and cognitive function deficits in animal models by decreasing autophagy and upregulating expression of glutamate transporter GLT-1; this also results in protection in animal models of Huntington's disease and attenuates the development of dependence and abstinence-induced withdrawal in animal models of substance abuse.



Bulk quantities available upon request

Product ID	Size
C1637	250 mg
C1637	500 mg
C1637	1 g

References Cui C, Cui Y, Gao J, et al. Neuroprotective effect of ceftriaxone in a rat model of traumatic brain injury. *Neurol Sci.* 2014 May;35(5):695-700. PMID: 24277205.

Sari Y, Prieto AL, Barton SJ, et al. Ceftriaxone-induced up-regulation of cortical and striatal GLT1 in the R6/2 model of Huntington's disease. *J Biomed Sci.* 2010 Jul 27;17:62. PMID: 20663216.

Rawls SM, Cavallo F, Capasso A, et al. The beta-lactam antibiotic ceftriaxone inhibits physical dependence and abstinence-induced withdrawal from cocaine, amphetamine, methamphetamine, and clorazepate in planarians. *Eur J Pharmacol.* 2008 Apr 28;584(2-3):278-84. PMID: 18342307.

Barriere SL, Flaherty JF. Third-generation cephalosporins: a critical evaluation. *Clin Pharm.* 1984 Jul-Aug;3(4):351-73. PMID: 6432420.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.