

Product Data Sheet

Product Name: Sulopenem

Cat. No.: GC61308

Chemical Properties

Cas. No. 120788-07-0

SMILES O=C(C(N12)=C(S[C@@H](CC3)C[S@@]3=O)S[C@]2([H])[C@@H]([C@H](O)C)C1=O)O

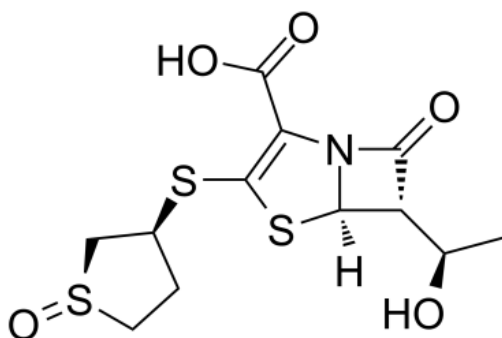
Formula $C_{12}H_{15}NO_5S_3$ M.Wt 349.45

Solubility Storage Store at -20°C

General For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT , or Condition blue ice upon request.

Structure



Background

Sulopenem (CP-70429) is an orally active, parenteral penem antibiotic with broad-spectrum activities against Gram-positive and Gram-negative bacteria. Sulopenem has the potential for urinary tract infections and intra-abdominal infections treatment. Sulopenem is inactive against *Pseudomonas aeruginosa* and *Xanthomonas maltophilia*[1][2][3].

Caution: Product has not been fully validated for medical applications. For research use only.

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Sulopenem has the potential for uncomplicated and complicated urinary tract infections and intra-abdominal infections treatment, including multidrug-resistant (MDR) infections and infections attributable to quinolone-nonsusceptible and/or extended-spectrum β -lactamase (ESBL)-producing Gram-negative bacilli[1]. Sulopenem inhibits the growth of most isolates of aerobic and anaerobic Gram-positive and Gram-negative bacteria, including methicillin-susceptible *Staphylococcus aureus*, *Streptococcus pneumoniae* (penicillin-susceptible and -resistant isolates), group A and B β -hemolytic streptococci, *Listeria monocytogenes*, Enterobacteriaceae, *Haemophilus influenzae*, and *Moraxella catarrhalis* but excluding *P. aeruginosa* and *Stenotrophomonas maltophilia*, at a concentration of ≤ 1 $\mu\text{g/mL}$ [1].

The protective effects of Sulopenem in murine experimental systemic infections are superior to those of Imipenem/Cilastatin. In murine experimental mixed infection with *Escherichia coli* and *Bacteroides fragilis*, Sulopenem has lower ED50. In guinea pigs experimental lung infection with *Klebsiella pneumoniae*, Sulopenem is more effective than CZON or Cefotiam[3].

[1]. James A Karlowsky, et al. In Vitro Activity of Sulopenem, an Oral Penem, Against Urinary Isolates of *Escherichia coli*. *Antimicrob Agents Chemother*. 2018 Dec 21;63(1):e01832-18. [2]. M Minamimura, et al. In Vitro Antibacterial Activity and Beta-Lactamase Stability of CP-70,429 a New Penem Antibiotic. *Antimicrob Agents Chemother*. 1993 Jul;37(7):1547-51. [3]. M Nagashima, et al. In Vitro and in Vivo Activities of Sulopenem Compared With Those of Imipenem and Cephalosporins. *Jpn J Antibiot*. 1996 Apr;49(4):303-23.

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