

Product Data Sheet

Product Name: Chlortetracycline

Cat. No.: GC40996

Chemical Properties

Cas. No. 57-62-5

SMILES OC([C@@](C(C(C(N)=O)=C(O)[C@H]1N(C)C)=O)(O)[C@@]1([H])C2)=C([C@@]2([H])[C@@]3(O)C)C(C4=C3C(Cl)=CC=C4O)=O

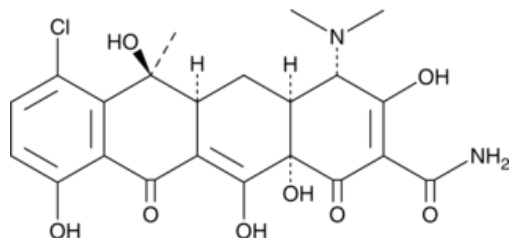
Formula C₂₂H₂₃ClN₂O₈ M.Wt 478.9

Solubility DMF: Soluble, DMSO: Soluble, Ethanol: Soluble, Methanol: Soluble
Storage Store at -20°C

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

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

Structure



Background

Chlortetracycline is a broad-spectrum antibiotic originally isolated from *S. aureofaciens*. It inhibits growth of both Gram-positive and Gram-negative bacteria at a range of 0.1-100 µg/ml against *A. aerogenes*, *D. pneumoniae*, *E. coli*, *K. pneumoniae*, *P. morganii*, and several species of *Haemophilus*, *Neisseria*, *Salmonella*, and *Staphylococcus*. Chlortetracycline protects mice from infection by various strains of *S. aureus* with protective doses (PD50s) of 0.2-7.5 mg/kg, and from infection by *E. coli* (PD50 = 3 mg/kg) and *K. pneumoniae* (PD50 = 75 mg/kg). It acts by inhibiting protein synthesis, and it binds to a single site on the 30S ribosome subunit. Chlortetracycline is an ionophore and is selective for calcium over sodium, potassium, magnesium, strontium, and barium. It transports calcium from an aqueous phase into an organic phase environment or into multilamellar

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

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vesicles. Chlortetracycline is also a fluorescent dye that can be used to monitor calcium flux.

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