

PRODUCT INFORMATION



Epitetracycline (hydrochloride)

Item No. 19470

CAS Registry No.: 23313-80-6
Formal Name: (4R,4aS,5aS,6S,12aS)-4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacene-carboxamide, monohydrochloride

Synonyms: Quatrimycin, 4-*epi*-Tetracycline

MF: C₂₂H₂₄N₂O₈ • HCl

FW: 480.9

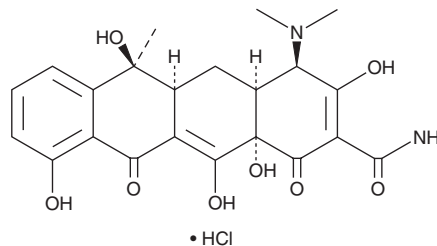
Purity: ≥98%

UV/Vis.: λ_{max}: 219, 256, 364 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

Epitetracycline (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the epitetracycline (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Epitetracycline (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of epitetracycline (hydrochloride) in these solvents is approximately 1 and 1.4 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 epitetracycline (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of epitetracycline (hydrochloride) in PBS (pH 7.2) is approximately 3.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Epitetracycline is an epimer of the antibiotic tetracycline (Item No. 14328). Epimers of tetracycline form without catalysis and are considered degradation products.^{1,2} Epitetracycline has decreased activity as an antibiotic or a Tet repressor effector but may have stronger toxic effects in animals.^{1,2}

References

1. Degenkolb, J., Takahashi, M., Ellestad, G.A., *et al.* Structural requirements of tetracycline-Tet repressor interaction: Determination of equilibrium binding constants for tetracycline analogs with the Tet repressor. *Antimicrob. Agents Chemother.* **35(8)**, 1591-1595 (1991).
2. Tong, X., Mao, M., Xie, J., *et al.* Insights into the interactions between tetracycline, its degradation products and bovine serum albumin. *SpringerPlus* **5(1)**, 1073 (2016).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM