

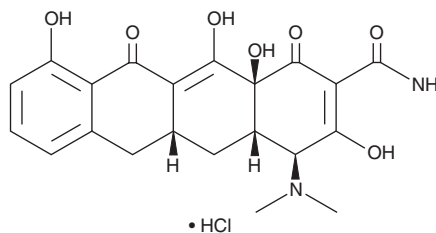
# PRODUCT INFORMATION



## Sancycline (hydrochloride)

Item No. 28118

**CAS Registry No.:** 6625-20-3  
**Formal Name:** (4S,4aS,5aR,12aS)-4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacencarboxamide, monohydrochloride  
**Synonyms:** 6-Demethyl-6-deoxytetracycline, NSC 51812  
**MF:** C<sub>21</sub>H<sub>22</sub>N<sub>2</sub>O<sub>7</sub> • HCl  
**FW:** 450.9  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 221, 268, 350 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

Sancycline (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the sancycline (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Sancycline (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of sancycline (hydrochloride) in ethanol is approximately 5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Sancycline (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, sancycline (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Sancycline (hydrochloride) has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Sancycline is a semisynthetic tetracycline antibiotic that is more active than tetracycline (Item No. 14328) against 339 strains of anaerobic bacteria (average MIC<sub>90s</sub> = 1 and 32 µg/ml, respectively).<sup>1,2</sup> Sancycline is active against tetracycline-resistant *E. coli*, *S. aureus*, and *E. faecalis* strains with MICs ranging from 0.06 to 1 µg/ml.<sup>3</sup> *In vivo*, sancycline is active against *S. aureus* in mice with ED<sub>50</sub> values of 0.46 and 0.6 mg/kg for intravenous and subcutaneous administration, respectively.

### References

1. McCormick, J.R.D., Jensen, E.R., Miller, P.A., *et al.* The 6-deoxytetracyclines. Further studies on the relationship between structure and antibacterial activity in the tetracycline series. *J. Am. Chem. Soc.* **82(13)**, 3381-3386 (1960).
2. Wexler, H.M., Molitoris, E., and Finegold, S.M. *In vitro* activities of two new glycylicyclines, *N,N*-dimethylglycylamido derivatives of minocycline and 6-demethyl-6-deoxytetracycline, against 339 strains of anaerobic bacteria. *Antimicrob. Agents Chemother.* **38(10)**, 2513-2515 (1994).
3. Testa, R.T., Perterson, P.J., Jacobus, N.V., *et al.* *In vitro* and *in vivo* antibacterial activities of the glycylicyclines, a new class of semisynthetic tetracyclines. *Antimicrob. Agents Chemother.* **37(11)**, 2270-2277 (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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/02/2022

#### 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