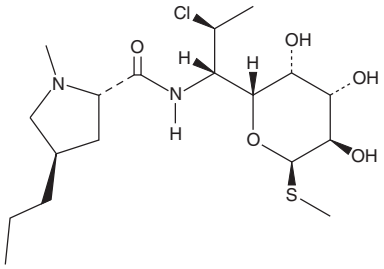
# PRODUCT INFORMATION

## Clindamycin

*Item No. 15006*

**CAS Registry No.:** 18323-44-9
**Formal Name:** methyl 7-chloro-6,7,8-trideoxy-6-[[[(2S,4R)-1-methyl-4-propyl-2-pyrrolidinyl]carbonyl]amino]-1-thio-L-*threo*-α-D-galacto-octopyranoside
**Synonym:** U-21251
**MF:** $C_{18}H_{33}ClN_2O_5S$
**FW:** 425.0
**Purity:** ≥95%
**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

Clindamycin is supplied as a crystalline solid. A stock solution may be made by dissolving the clindamycin in the solvent of choice, which should be purged with an inert gas. Clindamycin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of clindamycin in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

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 clindamycin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of clindamycin in PBS (pH 7.2) is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Clindamycin is a lincosamide antibiotic.[1,2] It is active against Gram-positive bacteria, including various strains of *S. pneumoniae*, *S. viridans*, *S. aureus*, and *S. epidermidis* (MICs = 0.002-0.1, 0.005-0.2, 0.04-1.6, and 0.1-0.2 µg/ml, respectively).[1] Clindamycin is also active against chloroquine-resistant and -sensitive strains of *P. falciparum* ($IC_{50}$s = 3.12 and 8.81 nM, respectively).[2] It inhibits bacterial protein synthesis by interacting with the 50S ribosome.[1] Clindamycin increases survival in a mouse model of a secondary *S. pneumoniae* infection when administered at a dose of 15 mg/kg twice daily for seven days.[3] Formulations containing clindamycin have been used in the treatment of bacterial infections.

### References


1. Spížek, J. and Řezanka, T. Lincomycin, clindamycin and their applications. *Appl. Microbiol. Biotechnol.* **64(4)**, 455-464 (2004).
2. Dahl, E.L. and Rosenthal, P.J. Multiple antibiotics exert delayed effects against the *Plasmodium falciparum* apicoplast. *Antimicrob. Agents Chemother.* **51(10)**, 3485-3490 (2007).
3. Karlström, Å., Boyd, K.L., English, B.K., *et al.* Treatment with protein synthesis inhibitors improves outcomes of secondary bacterial pneumonia after influenza. *J. Infect. Dis.* **199(3)**, 311-319 (2009).



**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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