

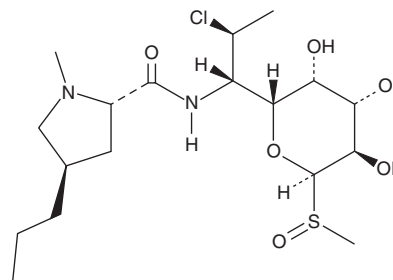
# PRODUCT INFORMATION



## Clindamycin Sulfoxide

Item No. 21696

**CAS Registry No.:** 22431-46-5  
**Formal Name:** 7-chloro-1,6,7,8-tetradeoxy-6-[[[(2S,4R)-1-methyl-4-propyl-2-pyrrolidinyl]carbonyl]amino]-1-(methylsulfinyl)-L-threo- $\alpha$ -D-galacto-octopyranose  
**Synonym:** U-25026A  
**MF:** C<sub>18</sub>H<sub>33</sub>ClN<sub>2</sub>O<sub>6</sub>S  
**FW:** 441.0  
**Purity:**  $\geq$ 90% (mixture of diastereomers)  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Clindamycin sulfoxide is supplied as a solid. A stock solution may be made by dissolving the clindamycin sulfoxide in the solvent of choice, which should be purged with an inert gas. Clindamycin sulfoxide is slightly soluble in methanol.

Clindamycin sulfoxide is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Clindamycin sulfoxide is an active metabolite of the antibiotic clindamycin (Item No. 15006).<sup>1</sup> It is formed via S-oxidation of clindamycin primarily by the cytochrome P450 (CYP) isoform CYP3A4. Clindamycin sulfoxide inhibits the growth of *P. prevotti*, *B. fragilis*, and *C. sordelli* *in vitro* with MIC values of 2, 2, and 1 mg/L, respectively.<sup>2</sup>

### References

1. Wynalda, M.A., Hutzler, J.M., Koets, M.D., *et al.* In vitro metabolism of clindamycin in human liver and intestinal microsomes. *Drug Metab. Dispos.* **31(7)**, 878-887 (2003).
2. Onderdonk, A.B., Brodasky, T.F., and Bannister, B. Comparative effects of clindamycin and clindamycin metabolites in the hamster model of antibiotic-associated colitis. *J. Antimicrob. Chemother.* **8(5)**, 383-393 (1981).

#### 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

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