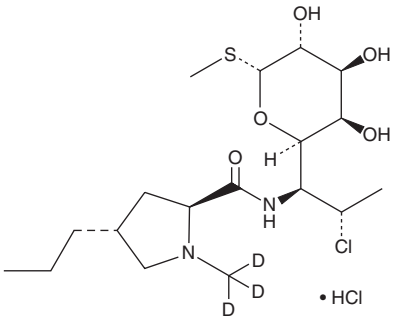
PRODUCT INFORMATION

Clindamycin-d_3 (hydrochloride)

Item No. 35424

CAS Registry No.:	1356933-72-6
Formal Name:	(2S,4R)-N-((1S,2S)-2-chloro-1-((2R,3R,4S,5R,6R)-3,4,5-trihydroxy-6-(methylthio)tetrahydro-2H-pyran-2-yl)propyl)-1-(methyl-d_3)-4-propylpyrrolidine-2-carboxamide, monohydrochloride
MF:	$C_{18}H_{30}D_3ClN_2O_5S \bullet HCl$
FW:	464.5
Chemical Purity:	≥90% (Clindamycin)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as:	A 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-d_3 (hydrochloride) is intended for use as an internal standard for the quantification of clindamycin (Item Nos. 15006 | 35581) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Clindamycin-d_3 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the clindamycin-d_3 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Clindamycin-d_3 (hydrochloride) is soluble in the organic solvent DMSO.

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).

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