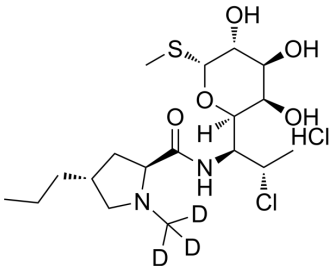
Clindamycin-d_3 hydrochloride

Cat. No.:	HY-B1455S
CAS No.:	1356933-72-6
Molecular Formula:	$C_{18}H_{31}D_3Cl_2N_2O_5S$
Molecular Weight:	464.46
Target:	Bacterial; Antibiotic; Parasite
Pathway:	Anti-infection
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	Clindamycin-d_3 (hydrochloride) is the deuterium labeled Clindamycin. Clindamycin is an orally active and broad-spectrum bacteriostatic lincosamide antibiotic. Clindamycin can inhibit bacterial protein synthesis, possessing the ability to suppress the expression of virulence factors in Staphylococcus aureus at sub-inhibitory concentrations (sub-MICs). Clindamycin resistance results from enzymatic methylation of the antibiotic binding site in the 50S ribosomal subunit (23S rRNA). Clindamycin decreases the production of Panton-Valentine leucocidin (PVL), toxic-shock-staphylococcal toxin (TSST-1) or alpha-haemolysin (Hla). Clindamycin also can be used for researching malaria[1][2].
IC_{50} & Target	Plasmodium
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Hodille E, et al. Clindamycin suppresses virulence expression in inducible clindamycin-resistant Staphylococcus aureus strains. Ann Clin Microbiol Antimicrob. 2018 Oct 20;17(1):38.

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