Chlortetracycline-d6 hydrochloride

Cat. No.: HY-B1327S

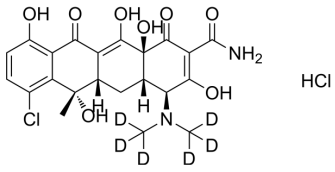
Molecular Formula: $C_{22}H_{18}D_6Cl_2N_2O_8$

Molecular Weight: 521.38

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Chlortetracycline-d_6 (hydrochloride) is the deuterium labeled Chlortetracycline hydrochloride. Chlortetracycline hydrochloride (7-Chlorotetracycline hydrochloride) is a specific and potent calcium ionophore antibiotic, inhibits binding of aminoacyl-tRNA to ribosomes.
IC_{50} & Target	Tetracycline
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]. Elmund GK, et al. Role of excreted chlortetracycline in modifying the decomposition process in feedlot waste. Bull Environ Contam Toxicol. 1971 Mar-Apr;6(2):129-32.

[3]. Saling PM, et al. Mouse gamete interactions during fertilization in vitro. Chlortetracycline as a fluorescent probe for the mouse sperm acrosome reaction. J Cell Biol. 1979 Dec;83(3):544-55.

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