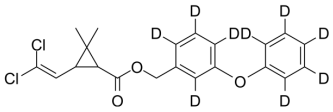
Permethrin-d_9

Cat. No.:	HY-B0887S1
Molecular Formula:	$C_{21}H_{11}D_9Cl_2O_3$
Molecular Weight:	400.34
Target:	Parasite; Isotope-Labeled Compounds
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Permethrin-d_9 is the deuterium labeled Permethrin. Permethrin (NRDC-143) is an insecticide, acaricide, and insect repellent; functions as a neurotoxin, affecting neuron membranes by prolonging sodium channel activation.
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]. Xiao X, et al. Exposure to permethrin promotes high fat diet-induced weight gain and insulin resistance in male C57BL/6J mice. Food Chem Toxicol. 2018 Jan;111:405-416.

[3]. Smith LB, et al. CYP-mediated permethrin resistance in Aedes aegypti and evidence for trans-regulation. PLoS Negl Trop Dis. 2018 Nov 19;12(11):e0006933.

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