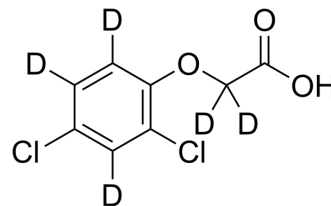


2,4-D-d₅

Cat. No.:	HY-18572S2
CAS No.:	352438-69-8
Molecular Formula:	C ₈ HD ₅ Cl ₂ O ₃
Molecular Weight:	226.07
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	2,4-D-d ₅ is the deuterium labeled 2,4-D[1]. 2,4-D (2,4-Dichlorophenoxyacetic acid) is a selective systemic herbicide for the control of broad-leaved weeds. 2,4-D acts as a plant hormone, causing uncontrolled growth in the meristematic tissues. 2,4-D inhibits DNA and protein synthesis and thereby prevents normal plant growth and development[2].
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 Feb;53(2):211-216.
- [2]. Germaine KJ, et al. Bacterial endophyte-enhanced phytoremediation of the organochlorine herbicide 2,4-dichlorophenoxyacetic acid. *FEMS Microbiol Ecol.* 2006 Aug;57(2):302-10.

Caution: Product has not been fully validated for medical applications. For research use only.

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