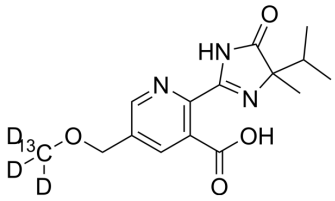
Imazamox-$^{13}C,d_3$

Cat. No.:	HY-100427S
Molecular Formula:	$C_{14}{}^{13}CH_{16}D_3N_3O_4$
Molecular Weight:	309.34
Target:	Acetolactate Synthase (ALS); Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Imazamox-$^{13}C,d_3$ is the ^{13}C- and deuterium labeled Imazamox. Imazamox (CL29926) is a systemic herbicide that inhibits the production of acetolactate synthase (ALS) in plants with high selectivity, high activity, safety and broadspectrum activity, which would then inhibit plant growth and ultimately lead to plant death[1][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[91]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. García-Garijo A, et al. Metabolic responses in root nodules of Phaseolus vulgaris and Vicia sativa exposed to the imazamox herbicide. Pestic Biochem Physiol. 2014 May;111:19-23.

[2]. Imazamox Chemical Fact Sheet. Wisconsin Department of Natural Resources. DNR PUB-WT-974 2012.

[3]. Sevim Ç, et al. An imazamox-based herbicide causes apoptotic changes in rat liver and pancreas. Toxicol Rep. 2018 Nov 19;6:42-50.

[4]. Wei J et al. Enantioselective Phytotoxicity of Imazamox Against Maize Seedlings. Bull Environ Contam Toxicol. 2016 Feb;96(2):242-7.

[5]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-223.

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