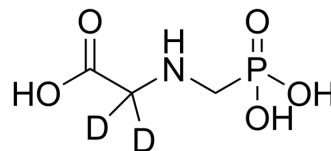


Glyphosate-d2-1

Cat. No.:	HY-B0863S2
Molecular Formula:	C ₃ H ₆ D ₂ NO ₅ P
Molecular Weight:	171.09
Target:	Apoptosis; Autophagy
Pathway:	Apoptosis; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Glyphosate-d ₂ -1 is the deuterium labeled Glyphosate[1]. Glyphosate is an herbicidal derivative of the amino acid glycine. Glyphosate targets and blocks a plant metabolic pathway not found in animals, the shikimate pathway, required for the synthesis of aromatic amino acids in plants[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]. Greim H, et al. Evaluation of carcinogenic potential of the herbicide glyphosate, drawing on tumor incidence data from fourteen chronic/carcinogenicity rodent studies. *Crit Rev Toxicol*. 2015;45(3):185-208.
- [3]. Zhang JW, et al The toxic effects and possible mechanisms of glyphosate on mouse oocytes. *Chemosphere*. 2019 Dec237:124435.

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

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