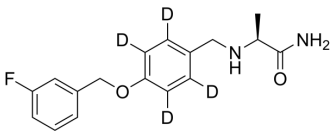
Safinamide-d_4-1

Cat. No.:	HY-70057S1
CAS No.:	2748522-33-8
Molecular Formula:	$C_{17}H_{15}D_4FN_2O_2$
Molecular Weight:	306.37
Target:	Monoamine Oxidase; Isotope-Labeled Compounds
Pathway:	Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Safinamide-d_4-1 is deuterium labeled Safinamide. Safinamide is a potent, selective, and reversible monoamine oxidase B (MAO-B) inhibitor (IC50=0.098 μM) over MAO-A (IC50=580 μM)[1]. Safinamide also blocks sodium channels and modulates glutamate (Glu) release, showing a greater affinity at depolarized (IC50=8 μM) than at resting (IC50=262 μM) potentials. Safinamide has neuroprotective and neurorescuing effects and can be used for the study of parkinson disease, ischemia stroke etc.al[2][3].
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]. C Caccia, et al.Safinamide: from molecular targets to a new anti-Parkinson drug. Neurology. 2006 Oct 10;67(7 Suppl 2):S18-23.

[3]. Leonetti F, et al. Solid-phase synthesis and insights into structure-activity relationships of safinamide analogues as potent and selective inhibitors of type B monoamine oxidase. J Med Chem, 2007, 50(20), 4909-4916.

[4]. Michele Morari, et al. Safinamide Differentially Modulates In Vivo Glutamate and GABA Release in the Rat Hippocampus and Basal Ganglia.J Pharmacol Exp Ther. 2018 Feb;364(2):198-206.

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