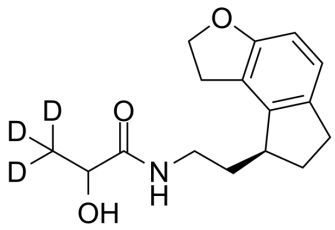
Ramelteon metabolite M-II-d_3

Cat. No.:	HY-103005S
CAS No.:	1246812-22-5
Molecular Formula:	$C_{16}H_{18}D_3NO_3$
Molecular Weight:	278.36
Target:	Melatonin Receptor; Drug Metabolite
Pathway:	GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Ramelteon metabolite M-II-d_3 is the deuterium labeled Ramelteon metabolite M-II. Ramelteon metabolite M-II is the major metabolite of Ramelteon, with IC50s of 208 pM, 1470 pM for human melatonin receptors (MT1 or MT2). Ramelteon is a selective melatonin agonist[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[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]. Nishiyama K, et al. Pharmacological characterization of M-II, the major human metabolite of ramelteon. Pharmacology. 2014;93(3-4):197-201.

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