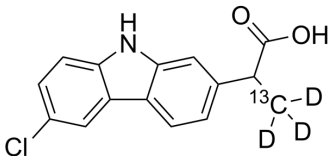
Carprofen-13C,d3

Cat. No.:	HY-B1227S1
CAS No.:	2012598-34-2
Molecular Formula:	$C_{14}{}^{13}CH_9D_3ClNO_2$
Molecular Weight:	277.73
Target:	FAAH; COX; Autophagy; Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease; Neuronal Signaling; Immunology/Inflammation; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Carprofen-^{13}C,d_3 is the deuterium and ^{13}C labeled Carprofen[1]. Carprofen is a nonsteroid anti-inflammatory agent, acts as a multi-target FAAH/COX inhibitor, with IC50s of 3.9 μM, 22.3 μM and 78.6 μM for COX-2, COX-1 and FAAH, respectively[2][3][4].
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]. Favia AD, et al. Identification and characterization of carprofen as a multitarget fatty acid amide hydrolase/cyclooxygenase inhibitor. J Med Chem. 2012 Oct 25;55(20):8807-26.

[3]. Waldherr K, et al. In vitro cytoprotective effects of acetylsalicylic acid, carprofen, meloxicam, or robenacoxib against apoptosis induced by sodium nitroprusside in canine cruciate ligament cells. Am J Vet Res. 2012 Nov73(11):1752-8.

[4]. Sessions JK, et al. In vivo effects of carprofen, deracoxib, and etodolac on prostanoid production in blood, gastric mucosa, and synovial fluid in dogs with chronic osteoarthritis. Am J Vet Res. 2005 May66(5):812-7.

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