## Ibuprofen-<sup>13</sup>C,d<sub>3</sub>

Cat. No.:	HY-78131S1	D O
CAS No.:	1261394-40-4	
Molecular Formula:	C <sub>12</sub> <sup>13</sup> CH <sub>15</sub> D <sub>3</sub> O <sub>2</sub>	
Molecular Weight:	210.29	
Target:	COX; Isotope-Labeled Compounds	
Pathway:	Immunology/Inflammation; Others	
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	$\checkmark$

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Description	Ibuprofen- <sup>13</sup> C,d <sub>3</sub> is the <sup>13</sup> C- and deuterium labeled Ibuprofen. Ibuprofen is an anti-inflammatory agent targeting COX-1 and COX-2 with IC50s of 13 μM and 370 μM, respectively.	
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 <sup>[87]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

## REFERENCES

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[2]. Driban JB, et al. Joint inflammation and early degeneration induced by high-force reaching are attenuated by ibuprofen in an animal model of work-related musculoskeletal disorder. J Biomed Biotechnol. 2011;2011:691412

[3]. Khwaja F, et al. Ibuprofen inhibits survival of bladder cancer cells by induced expression of the p75NTR tumor suppressor protein. Cancer Res. 2004 Sep 1;64(17):6207-13.

[4]. Noreen Y, et al. Development of a radiochemical cyclooxygenase-1 and -2 in vitro assay for identification of natural products as inhibitors of prostaglandin biosynthesis. J Nat Prod. 1998 Jan;61(1):2-7.

[5]. Palayoor ST, et al. Constitutive activation of IkappaB kinase alpha and NF-kappaB in prostate cancer cells is inhibited by ibuprofen. Oncogene. 1999 Dec 2;18(51):7389-94.

[6]. Rao GH, et al. Ibuprofen protects platelet cyclooxygenase from irreversible inhibition by aspirin. Arteriosclerosis. 1983 Jul-Aug;3(4):383-8.

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

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