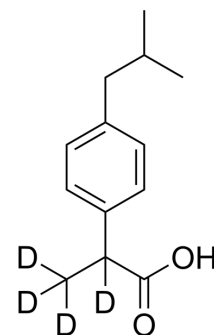


Ibuprofen-d₄

Cat. No.:	HY-78131S2		
Molecular Formula:	C ₁₃ H ₁₄ D ₄ O ₂		
Molecular Weight:	210.31		
Target:	Apoptosis; COX; Parasite		
Pathway:	Apoptosis; Immunology/Inflammation; Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (475.49 mM; Need ultrasonic)

H₂O : 1 mg/mL (4.75 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		4.7549 mL	23.7744 mL	47.5489 mL
	5 mM		0.9510 mL	4.7549 mL	9.5098 mL
	10 mM		0.4755 mL	2.3774 mL	4.7549 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Ibuprofen-d₄ is a potent, orally active, selective COX-1 inhibitor with an IC₅₀ value of 13 μM. Ibuprofen inhibits cell proliferation, angiogenesis, and induces cell apoptosis. Ibuprofen is a nonsteroidal anti-inflammatory agent and a nitric oxide (NO) donor. Ibuprofen ((±)-Ibuprofen) can be used in the research of pain, swelling, inflammation, infection, immunology, cancers[2][3][4][5].

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

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- [3]. Hassan Akrami, et al. Inhibitory effect of ibuprofen on tumor survival and angiogenesis in gastric cancer cell. *Tumour Biol.* 2015 May36(5):3237-43.
- [4]. Nathan D Pennock, et al. Ibuprofen supports macrophage differentiation, T cell recruitment, and tumor suppression in a model of postpartum breast cancer. *J Immunother Cancer.* 2018 Oct 16(1):98.
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Caution: Product has not been fully validated for medical applications. For research use only.

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