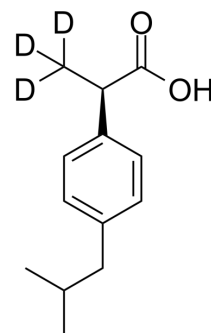


(R)-(-)-Ibuprofen-d₃

Cat. No.:	HY-78131BS		
CAS No.:	121702-86-1		
Molecular Formula:	C ₁₃ H ₁₅ D ₃ O ₂		
Molecular Weight:	209.3		
Target:	NF-κB		
Pathway:	NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : ≥ 60 mg/mL (286.67 mM)
 DMSO : ≥ 50 mg/mL (238.89 mM)
 DMF : ≥ 45 mg/mL (215.00 mM)
 PBS (pH 7.2) : ≥ 2 mg/mL (9.56 mM)
 * "≥" means soluble, but saturation unknown.

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.7778 mL	23.8892 mL	47.7783 mL
	5 mM	0.9556 mL	4.7778 mL	9.5557 mL
	10 mM	0.4778 mL	2.3889 mL	4.7778 mL

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

BIOLOGICAL ACTIVITY

Description

(R)-(-)-Ibuprofen-d₃ is the deuterium labeled (R)-(-)-Ibuprofen. (R)-(-)-Ibuprofen is the R enantiomer of Ibuprofen, inactive on COX, inhibits NF-κB activation; (R)-(-)-Ibuprofen exhibits anti-inflammatory and antinociceptive effects.

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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- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Evans AM, et al. Comparative pharmacology of S(+)-ibuprofen and (RS)-ibuprofen. *Clin Rheumatol.* 2001 Nov;20 Suppl 1:S9-14.
- [3]. Scheuren N, et al. Modulation of transcription factor NF-kappaB by enantiomers of the nonsteroidal drug ibuprofen. *Br J Pharmacol.* 1998 Feb;123(4):645-52.
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Caution: Product has not been fully validated for medical applications. For research use only.

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