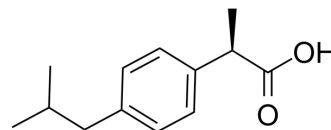


(R)-(-)-Ibuprofen

Cat. No.:	HY-78131B		
CAS No.:	51146-57-7		
Molecular Formula:	C ₁₃ H ₁₈ O ₂		
Molecular Weight:	206.28		
Target:	NF-κB		
Pathway:	NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (484.78 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	4.8478 mL	24.2389 mL	48.4778 mL
		5 mM	0.9696 mL	4.8478 mL	9.6956 mL
10 mM		0.4848 mL	2.4239 mL	4.8478 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	(R)-(-)-Ibuprofen is the R enantiomer of Ibuprofen, inactive on COX, inhibits NF-κB activation; (R)-(-)-Ibuprofen exhibits anti-inflammatory and antinociceptive effects.
IC₅₀ & Target	NF-κB
In Vitro	(R)-(-)-Ibuprofen is the R enantiomer of Ibuprofen, with no inhibitory effect on COX, but is involved in pathways of lipid metabolism and is incorporated into triglycerides along with endogenous fatty acids ^[1] . (R)-(-)-Ibuprofen (1 μM) significantly

reduces NF- κ B activation and completely prevents NF- κ B induction at 10 μ M. (R)-(-)-Ibuprofen inhibits NF- κ B luciferase activity with an IC₅₀ of 121.8 μ M, weaker than that of S(+)-ibuprofen (IC₅₀, 61.7 μ M). Furthermore, (R)-(-)-Ibuprofen (10 mM) has no effect on HSF^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Universität Würzburg. 2023 Jul 25.
- Chemrxiv. Jan 31, 2022.

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REFERENCES

[1]. Evans AM, et al. Comparative pharmacology of S(+)-ibuprofen and (RS)-ibuprofen. Clin Rheumatol. 2001 Nov;20 Suppl 1:S9-14.

[2]. 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.

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

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