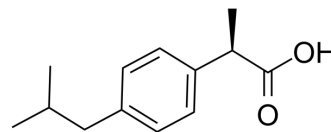


## (R)-(-)-Ibuprofen

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



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (484.78 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	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.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	(R)-(-)-Ibuprofen is the R enantiomer of Ibuprofen, inactive on COX, inhibits NF-κB activation; (R)-(-)-Ibuprofen exhibits anti-inflammatory and antinociceptive effects.
<b>IC<sub>50</sub> &amp; Target</b>	NF-κB
<b>In Vitro</b>	(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 <sup>[1]</sup> . (R)-(-)-Ibuprofen (1 μM) significantly

---

reduces NF- $\kappa$ B activation and completely prevents NF- $\kappa$ B induction at 10  $\mu$ M. (R)-(-)-Ibuprofen inhibits NF- $\kappa$ B luciferase activity with an IC<sub>50</sub> of 121.8  $\mu$ M, weaker than that of S(+)-ibuprofen (IC<sub>50</sub>, 61.7  $\mu$ M). Furthermore, (R)-(-)-Ibuprofen (10 mM) has no effect on HSF<sup>[2]</sup>.

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.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## 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.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA