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**Product Data Sheet**

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Product Name: (R)-(-)-Ibuprofen-d3

Cat. No.: GC69823

**Chemical Properties**

Cas. No. 121702-86-1

Formula  $C_{13}H_{15}D_3O_2$  M.Wt 209.3

Solubility Ethanol :  $\geq 60$  mg/mL (286.67 mM); DMSO :  $\geq 50$  mg/mL Store  
(238.89 mM); DMF :  $\geq 45$  mg/mL (215.00 mM); PBS (pH 7.2) : Storage at -  
 $\geq 2$  mg/mL (9.56 mM) 20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it  
in the ultrasonic bath for a while. Stock solution can be stored below -20°C for  
several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship  
Condition with RT , or blue ice upon request.

Structure **Background**

(R)-(-)-Ibuprofen-d<sub>3</sub> is the deuterium labeled (R)-(-)-Ibuprofen. (R)-(-)-Ibuprofen is the R enantiomer of Ibuprofen, inactive on NF-κB activation; (R)-(-)-Ibuprofen exhibits anti-inflammatory and antinociceptive effects.

Stable heavy isotopes of drogen, 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>[1]</sup>.

[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.

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

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