

# Produktinformation



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## SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



# PRODUCT INFORMATION



## (±)-Ibuprofen-d<sub>3</sub> (sodium salt)

Item No. 36332

CAS Registry No.: 1219805-09-0

Formal Name:  $(\pm)$ - $\alpha$ -methyl-4-(2-methylpropyl)-

benzeneacetic acid-d<sub>3</sub>, monosodium salt

Synonym: DL-Ibuprofen-d<sub>3</sub> MF:  $C_{13}H_{14}D_3O_2 \bullet Na$ 

231.3 FW:

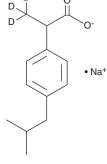
**Chemical Purity:** ≥98% ((±)-Ibuprofen)

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>);  $\leq$ 1% d<sub>0</sub>

Supplied as: A solid -20°C Storage: Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



#### **Laboratory Procedures**

(±)-Ibuprofen-d3 (sodium salt) is intended for use as an internal standard for the quantification of (±)-ibuprofen (Item No. 70280) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

(±)-Ibuprofen-d<sub>3</sub> (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the (±)-ibuprofen-d<sub>3</sub> (sodium salt) in the solvent of choice, which should be purged with an inert gas. (±)-lbuprofen-d3 (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ( $\pm$ )-ibuprofen-d<sub>3</sub> (sodium salt) in ethanol and DMSO is approximately 50 mg/ml and approximately 30 mg/ml in DMF.

#### Description

(±)-Ibuprofen is a non-steroidal anti-inflammatory drug (NSAID) and non-selective COX inhibitor (IC<sub>50</sub>s = 2.6 and 1.3 μM for human recombinant COX-1 and COX-2, respectively).<sup>1</sup> In vivo, (±)-ibuprofen inhibits late-phase formalin-induced paw licking in mice (ED<sub>50</sub> = 6.1 mg/kg).<sup>2</sup> It also inhibits acetic acid-induced writhing in mice ( $ED_{50} = 0.47 \text{ mg/kg}$ ). Formulations containing (±)-ibuprofen have been used in the treatment of fever and mild to severe pain.

#### References

- 1. Johnson, J.L., Wimsatt, J., Buckel, S.D., et al. Purification and characterization of prostaglandin H synthase-2 from sheep placental cotyledons. Arch. Biochem. Biophys. 324(1), 26-34 (1995).
- 2. Seguin, L., Le Marouille-Girardon, S., and Millan, M.J. Antinociceptive profiles of non-peptidergic neurokinin, and neurokinin, receptor antagonists: A comparison to other classes of antinociceptive agent. Pain 61(2), 325-343 (1995).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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### **CAYMAN CHEMICAL**

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.**CAYMANCHEM**.COM