

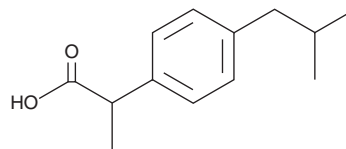
PRODUCT INFORMATION



(±)-Ibuprofen

Item No. 70280

CAS Registry No.: 15687-27-1
Formal Name: (±)- α -methyl-4-(2-methylpropyl)-benzeneacetic acid
Synonyms: DL-Ibuprofen, NSC 256854, U-18753
MF: C₁₃H₁₈O₂
FW: 206.3
Purity: ≥99%
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

(±)-Ibuprofen is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-ibuprofen in the solvent of choice, which should be purged with an inert gas. Ibuprofen is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (±)-ibuprofen in these solvents is approximately 60, 50, and 45 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (±)-ibuprofen can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (±)-ibuprofen in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(±)-Ibuprofen is a non-steroidal anti-inflammatory drug (NSAID) and non-selective COX inhibitor (IC₅₀s = 2.6 and 1.3 μ M for human recombinant COX-1 and COX-2, respectively).¹ *In vivo*, (±)-ibuprofen inhibits late-phase formalin-induced paw licking in mice (ED₅₀ = 6.1 mg/kg).² It also inhibits acetic acid-induced writhing in mice (ED₅₀ = 0.47 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 neurokinin₁ and neurokinin₂ 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.

SAFETY DATA

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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