

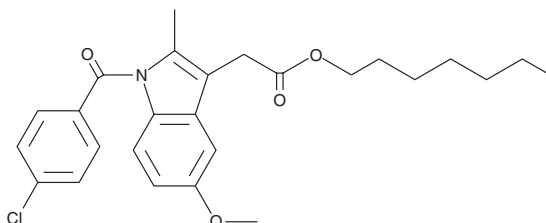
# PRODUCT INFORMATION



## Indomethacin heptyl ester

Item No. 70271

**CAS Registry No.:** 282728-47-6  
**Formal Name:** 1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetic acid, 1-heptyl ester  
**MF:** C<sub>26</sub>H<sub>30</sub>ClNO<sub>4</sub>  
**FW:** 456.0  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 230, 260, 319 nm  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Indomethacin heptyl ester is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the indomethacin heptyl ester under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of indomethacin heptyl ester in these solvents is approximately 18, 17, and 19 mg/ml, respectively.

### Description

Indomethacin is a potent but non-selective inhibitor of both COX-1 and COX-2 in sheep and humans.<sup>1</sup> Structurally, indomethacin is a substituted indole acetic acid, wherein the carboxylate can be derivatized as an ester or amide. These derivatives show enhanced selectivity for the COX-2 isoform. For example, the IC<sub>50</sub> for indomethacin heptyl ester for the inhibition of human recombinant COX-2 is 0.04 μM, making it more than 1,700 times more potent as an inhibitor of COX-2 than COX-1.<sup>2</sup> While indomethacin itself has an IC<sub>50</sub> of 0.05 μM for the inhibition of COX-2, it also inhibits COX-1 with a corresponding IC<sub>50</sub> of 0.67 μM.<sup>2</sup>

### References

1. Barnett, J., Chow, J., Ives, D., *et al.* Purification, characterization and selective inhibition of human prostaglandin G/H synthase 1 and 2 expressed in the baculovirus system. *Biochim. Biophys. Acta* **1209**(1), 130-139 (1994).
2. Kalgutkar, A.S., Marnett, A.B., Crews, B.C., *et al.* Ester and amide derivatives of the nonsteroidal antiinflammatory drug, indomethacin, as selective cyclooxygenase-2 inhibitors. *J. Med. Chem.* **43**(15), 2860-2870 (2000).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 06/30/2023

#### 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