
Product Data Sheet

Product Name: Indomethacin heptyl ester

Cat. No.: GC12719

Chemical Properties

Cas. No. 282728-47-6

Chemical Name 1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetic acid, 1-heptyl ester

SMILES C1C=CC=C(C(N2C(C=CC(OC)=C3)=C3C(CC(OCCCCCCC)=O)=C2C)=O)C=C1Formula $C_{26}H_{30}ClNO_4$ M.Wt 456.0Solubility ≤ 17 mg/ml in ethanol; 17mg/ml in DMSO; 17mg/ml in dimethyl formamide Storage Store at -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 Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Indomethacin heptyl ester is a potent and selective COX-2 inhibitor with IC₅₀ value of 0.04 μ M [1].

The key step in thromboxane and prostaglandin biosynthesis involves the conversion of arachidonic acid to prostaglandin H₂ (PGH₂), a reaction catalyzed by the cyclooxygenase (COX) and peroxidase activities of prostaglandin endoperoxide synthase or cyclooxygenase. COX is composed of COX-1 and COX-2. COX-2 plays important role in prostaglandin biosynthesis in inflammatory cells and in the central nervous system [1].

Indomethacin is a potent COX-1 and COX-2 inhibitor with IC₅₀ value of 0.05 μ M and 0.75 μ M, and is also a nonsteroidal antiinflammatory drug. Indomethacin is a substituted indole acetic acid and many of the structurally diverse indomethacin esters and amides show enhanced selectivity for the COX-2 isoform. Indomethacin heptyl ester was more potent and selective COX-2 inhibitor with IC₅₀ value of 0.04 μ M and >66 μ M for human

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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recombinant COX-2 and COX-1, respectively [1].

Reference:

[1]. Kalgutkar AS, Marnett AB, Crews BC, et al. Ester and amide derivatives of the nonsteroidal antiinflammatory drug, indomethacin, as selective cyclooxygenase-2 inhibitors. J Med Chem. 2000 Jul 27;43(15):2860-70.

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