

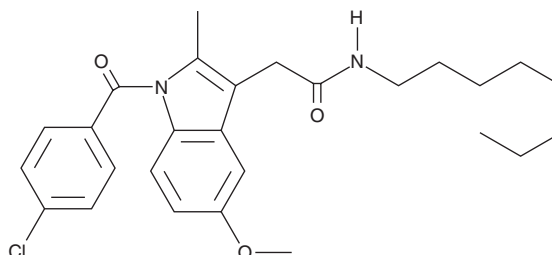
PRODUCT INFORMATION



Indomethacin N-octyl amide

Item No. 70273

CAS Registry No.: 282728-65-8
Formal Name: N-octyl-1-(4-chlorobenzoyl)-5-methoxy-1H-indole-3-acetamide
MF: C₂₇H₃₃ClN₂O₃
FW: 469.0
Purity: ≥98%
UV/Vis.: λ_{max}: 230, 260, 319 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Indomethacin N-octyl amide is supplied as a crystalline solid. A stock solution may be made by dissolving the indomethacin N-octyl amide in the solvent of choice, which should be purged with an inert gas. Indomethacin N-octyl amide is soluble in organic solvents such as ethanol and dimethyl formamide (DMF). The solubility of indomethacin N-octyl amide in these solvents is approximately 2 and 27 mg/ml, respectively.

Indomethacin N-octyl amide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, indomethacin N-octyl amide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Indomethacin N-octyl amide has a solubility of approximately 8 mg/ml in a 5:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Indomethacin is a potent but non-selective inhibitor of both COX-1 and COX-2 in sheep and humans.¹ Structurally, indomethacin is a substituted indole acetic acid, wherein the carboxylate can be derivitized as an ester or amide. These derivatives show enhanced selectivity for the COX-2 isoform. For example, the IC₅₀ values of indomethacin N-octyl amide for the inhibition of ovine COX-1 and human recombinant COX-2 are 66 μM and 40 nM, respectively, making it 1,650 times more potent as an inhibitor of COX-2 than COX-1.² While indomethacin itself has an IC₅₀ of 0.05 μM for the inhibition of COX-2, it also inhibits COX-1 with a corresponding IC₅₀ of 0.67 μM.

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.

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