
Product Data Sheet

Product Name: N-(2-phenylethyl)-Indomethacin amide

Cat. No.: GC17980

Chemical Properties

Cas. No. 261766-32-9

Chemical Name N-(2-phenylethyl)-1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetamide

SMILES O=C(CC1=C(C)N(C(C2=CC=C(Cl)C=C2)=O)C3=C1C=C(OC)C=C3)N([H])CCC4=CC=CC=C4

Formula C₂₇H₂₅ClN₂O₃

M.Wt 461

Solubility ≤80mg/ml in ethanol;10mg/ml in DMSO;14mg/ml in dimethyl formamide

Storage Store at -20°C

General For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT , or Condition blue ice upon request.

Structure

Background

N-(2-phenylethyl)-Indomethacin amide is a reversible, potent and selective COX-2 inhibitor [1].

Cyclooxygenase (COX) is an enzyme responsible for formation of prostanoids, including thromboxane and prostaglandins such as prostacyclin. COX-1 is the constitutive isoform and is mainly responsible for the synthesis of cytoprotective prostaglandins in the gastrointestinal tract (GI) and of the proaggregatory thromboxane in blood platelets. COX-2 is inducible and short-lived that is stimulated by endotoxin, cytokines, and mitogens. COX-2 plays important roles in prostaglandin biosynthesis in inflammatory cells the central nervous system [1].

N-(2-phenylethyl)-Indomethacin amide (N-2PIA) is a reversible, potent and selective COX-2 inhibitor that inhibits human recombinant COX-2 and ovine COX-1 with IC₅₀ values of 0.06 and >66 μM, respectively. It is over 1000 times less potent as an inhibitor of ovine COX-1. N-(2-phenylethyl)-Indomethacin amide is an analogous derivative of indomethacin that shows selective against COX-2 [1].

In the carageenan-induced foot pad edema assay, orally administration of N-2PIA showed anti-inflammatory activity [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

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

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