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## Product Data Sheet

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Product Name: N-(3-pyridyl)-Indomethacin amide

Cat. No.: GC15959

### Chemical Properties

Cas. No. 261766-29-4

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

SMILES ClC1=CC=C(C(N2C(C=CC(OC)=C3)=C3C(CC(N([H])C4=CN=CC=C4)=O)=C2C)=O)C=C1

Formula  $C_{24}H_{20}ClN_3O_3$  M.Wt 433.9

Solubility  $\leq 3\text{mg/ml}$  in ethanol;  $3\text{mg/ml}$  in DMSO;  $3\text{mg/ml}$  in dimethyl formamide Storage Store at  $-20^\circ\text{C}$

General For obtaining a higher solubility, please warm the tube at  $37^\circ\text{C}$  and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below  $-20^\circ\text{C}$  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-(3-pyridyl)-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-(3-pyridyl)-indomethacin amide (N-3PyIA) is a reversible, potent and selective COX-2 inhibitor that inhibits human recombinant COX-2 and ovine COX-1 with IC<sub>50</sub> values of 0.052 and  $>66\ \mu\text{M}$ , respectively. It is over 1300 times less potent as an inhibitor of ovine COX-1. N-(3-pyridyl)-indomethacin amide is the 3-pyridyl amide derivative of indomethacin that shows selective against COX-2 [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.

**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