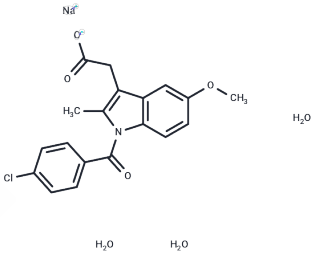
Data Sheet (Cat.No.T22346)

TargetMol

Indomethacin sodium hydrate

Chemical Properties



CAS No. : 74252-25-8

Formula: C19H21ClNNaO7

Molecular Weight: 433.82

Storage: Store under nitrogen,Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Indomethacin sodium hydrate is an effective orally active, competitive, and reversible inhibitor of COX-1 and COX-2, with IC50 values of 18 nM and 26 nM, respectively. It possesses anti-inflammatory, anticancer, and antimicrobial activities and is commonly used in research related to cancer, inflammation, and viral infections. Additionally, it can induce migraines and gastrointestinal injury and is used to study increased intracranial pressure secondary to severe traumatic brain injury in adults, as well as rheumatoid arthritis. It can also be used to induce gastric ulcer models.
Targets(IC50)	COX
In vitro	In 3LL-D122 cells, Indomethacin sodium hydrate (0, 20, 50, 100, and 150 μM; 24 hours) inhibited cell viability, with inhibition observed at 20 mM and 50% inhibition at 60 mM[2].
In vivo	In male Sprague-Dawley rats, Indomethacin sodium hydrate (0.01-10 mg/kg; oral administration; for 3 hours) inhibited carrageenan-induced paw edema and hyperalgesia in a dose-dependent manner, with an ED50 of 2.0 mg/kg for paw edema and 1.5 mg/kg for hyperalgesia[1].

Solubility Information

Solubility	DMSO: 5 mg/mL (11.53 mM),Sonification is recommended. H2O: 20 mg/mL (46.1 mM),Sonification is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.31 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3051 mL	11.5255 mL	23.051 mL
5 mM	0.461 mL	2.3051 mL	4.6102 mL
10 mM	0.2305 mL	1.1526 mL	2.3051 mL
50 mM	0.0461 mL	0.2305 mL	0.461 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Riendeau D, et al. Biochemical and pharmacological profile of a tetrasubstituted furanone as a highly selective COX-2 inhibitor. Br J Pharmacol. 1997 May;121(1):105-17.
Eli Y, et al. Comparative effects of indomethacin on cell proliferation and cell cycle progression in tumor cells grown in vitro and in vivo. Biochem Pharmacol. 2001 Mar 1;61(5):565-71.
Amici C, et al. Inhibition of viral protein translation by indomethacin in vesicular stomatitis virus infection: role of eIF2α kinase PKR. Cell Microbiol. 2015 Sep;17(9):1391-404.