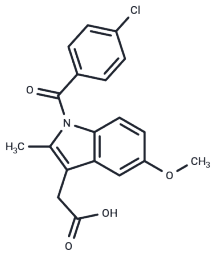
Data Sheet (Cat.No.T0458)

TargetMol

Indomethacin

Chemical Properties



CAS No. : 53-86-1

Formula: C19H16ClNO4

Molecular Weight: 357.79

Storage: 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 is an orally active nonsteroidal anti-inflammatory drug (NSAID) that non-selectively inhibits cyclooxygenase enzymes COX-1 and COX-2, with IC_{50} values of 18 nM and 26 nM, respectively. It exhibits good blood-brain barrier permeability and shows significant anti-inflammatory, anti-tumor, and anti-infective activities. Indomethacin is widely used in research related to cancer, inflammation, and viral infections, and is also commonly used to induce gastric ulcer models in animals.
Targets(IC50)	Autophagy,COX,PDE,Phospholipase
In vitro	**METHODS**: Human gastric cancer cells AGS were treated with Indomethacin (100-500 μM) for 24 h, and the expression levels of target proteins were detected by Western Blot. **RESULTS**: Indomethacin increased LC3-II protein levels in AGS cells, which may be a result of induction of autophagy or inhibition of lysosome-dependent autophagic degradation. [1] **METHODS**: Human tumor cells HT29 and A431 were treated with Indomethacin (1-10 μM) and EGF (25 ng/mL) for 24-48 h. Cell migration was detected by wound-healing assay. **RESULTS**: Indomethacin inhibited HT29 cell migration. After treating A431 cells with EGF only, the wound closed within 24 h, but the wound remained open after 24 h of
In vivo	**METHODS**: To test the antitumor activity in vivo, Indomethacin (1 mg/kg) was administered by gavage to CDF1 mice bearing Colon 26 xenografts twice daily for 7-21 days. **RESULTS**: Mean tumor weight was significantly lower in both the long-term and short-term Indomethacin administration groups, serum immunosuppressive acidic protein levels were significantly lower, serum IL-6 levels were also significantly lower, and prostaglandin E2 levels in tumor tissues were significantly lower than those in the control group. [3]

Solubility Information

Solubility	DMSO: 104 mg/mL (290.67 mM),Sonication is recommended. Ethanol: 17.9 mg/mL (50.03 mM),Heating 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: 3.58 mg/mL (10.01 mM),Solution. *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	2.7949 mL	13.9747 mL	27.9494 mL
5 mM	0.559 mL	2.7949 mL	5.5899 mL
10 mM	0.2795 mL	1.3975 mL	2.7949 mL
50 mM	0.0559 mL	0.2795 mL	0.559 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

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