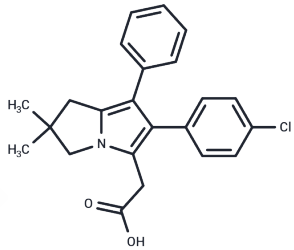
Data Sheet (Cat.No.T6568)

TargetMol

Licofelone

Chemical Properties



CAS No. : 156897-06-2

Formula: C23H22ClNO2

Molecular Weight: 379.88

Storage: Store at low temperature,Keep away from moisture
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	Licofelone (ML-3000) is a dual COX/LOX inhibitor potentially for treating osteoarthritis, acting as both an analgesic and anti-inflammatory. By inhibiting 5-LOX, it may reduce the gastrointestinal toxicity associated with other non-steroidal anti-inflammatory drugs, which only inhibit COX (cyclooxygenase).
Targets(IC50)	Apoptosis,COX,Lipoxygenase
In vitro	The dual COX/5-LOX inhibitor licofelone triggers apoptosis in a dose- and time-dependent manner in HCA-7 colon cancer cells.?Induction of apoptosis was related to the recruitment of the intrinsic mitochondrial apoptotic pathway, as shown by loss in mitochondrial membrane potential, cytochrome c release, caspase-9 and 3 activation and poly-(ADP-ribose)polymerase-1 cleavage.?Moreover, licofelone induced the cleavage of the full-length p21(Bax) into p18(Bax), a more potent inducer of the apoptotic process than the uncleaved form.?Pre-treatment of HCA-7 cells with the pan-caspase inhibitor z-VAD-fmk significantly blocked licofelone-induced apoptosis, confirming that this process occurred primarily in a caspase-dependent pathway.? Licofelone was able to affect the arachidonic acid (AA) cascade, as it blocked the activity of 5-LOX and COX enzymes, and it induced, through the phosphorylation of cytoplasmic phospholipase A(2) (cPLA(2)), the release of unesterified AA from HCA-7 membrane phospholipids.[1]

Solubility Information

Solubility	DMSO: 31.25 mg/mL (82.26 mM),Sonication is recommended. Ethanol: 10 mg/mL (26.32 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble) (< 1 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (5.26 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	2.6324 mL	13.1621 mL	26.3241 mL
5 mM	0.5265 mL	2.6324 mL	5.2648 mL
10 mM	0.2632 mL	1.3162 mL	2.6324 mL
50 mM	0.0526 mL	0.2632 mL	0.5265 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

Tavolari S, et al. Licofelone, a dual COX/5-LOX inhibitor, induces apoptosis in HCA-7 colon cancer cells through the mitochondrial pathway independently from its ability to affect the arachidonic acid cascade. Carcinogenesis. 2008 Feb;29(2):371-80.
https://www.ncbi.nlm.nih.gov/pubmed/8021931