

Lucanthone

Chemical Properties

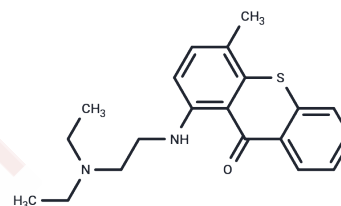
CAS No. : 479-50-5

Formula: C₂₀H₂₄N₂O₅

Molecular Weight: 340.48

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	Lucanthone (Lucanthonomum) is an inhibitor of Apurinic endonuclease-1 (APE-1).
Targets(IC50)	Parasite, Autophagy, DNA/RNA Synthesis
In vitro	Lucanthone, an innovative autophagy inhibitor, induces apoptosis through cathepsin D activation and has been evaluated for its anticancer efficacy via MTT assay. Demonstrating a consistent reduction in viability across seven breast cancer cell lines, Lucanthone surpasses Chloroquine (CQ) in potency, evidenced by a significantly lower mean IC ₅₀ of 7.2 μM compared to 66 μM for CQ. Further validation through ATPlite assay and trypan blue exclusion in two representative cell lines (MDA-MB-231 and BT-20) confirms these findings.
Cell Research	Cell viability is assessed by MTT assay. Cells are seeded into 96-well microculture plates at 10,000 cells per well and allowed to attach for 24 h. Cells are then treated with Lucanthone (0, 0.5, 1, 5, 10, 20 and 40 μM), Chloroquine, Vorinostat, or combinations for 72 h. Following drug treatment, MTT is added and cell viability is quantified using a BioTek microplate reader. Effects on cell viability are also determined by measuring ATP levels using the ATPlite assay system and by trypan blue exclusion. Pro-apoptotic effects following in vitro drug exposure are quantified by propidium iodide (PI) staining and fluorescence-activated cell sorting (FACS) analysis of sub-G ₀ /G ₁ DNA content[2]

Solubility Information

Solubility	DMSO: 60 mg/mL (176.22 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.937 mL	14.6852 mL	29.3703 mL
5 mM	0.5874 mL	2.937 mL	5.8741 mL
10 mM	0.2937 mL	1.4685 mL	2.937 mL
50 mM	0.0587 mL	0.2937 mL	0.5874 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

Chowdhury SM,etal.Graphene nanoribbons as a drug delivery agent for lucanthone mediated therapy of glioblastoma multiforme.Nanomedicine. 2015 Jan;11(1):109-18.

Carew JS,etal.Lucanthone is a novel inhibitor of autophagy that induces cathepsin D-mediated apoptosis.J Biol Chem. 2011 Feb 25;286(8):6602-13.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

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