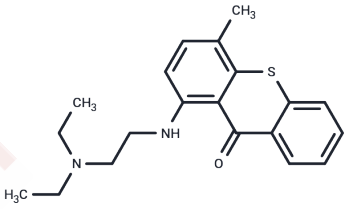
# Data Sheet (Cat.No.T4569)

TargetMol

## Lucanthone

### Chemical Properties



CAS No. : 479-50-5

Formula: C20H24N2OS

Molecular Weight: 340.48

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

### Biological Description

| | |
|---|---|
| Description | Lucanthone (Lucanthonum) is an inhibitor of Apurinic endonuclease-1 (APE-1). |
| Targets(IC50) | 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 IC50 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-G0/G1 DNA content[2] |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 60 mg/mL (176.22 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

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.

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.



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