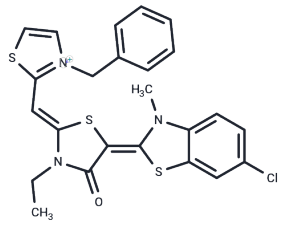
Data Sheet (Cat.No.T5350)

TargetMol

JG-98

Chemical Properties



CAS No. : 1456551-16-8

Formula: C24H21Cl2N3OS3

Molecular Weight: 534.53

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	JG-98 is an allosteric Hsp70 inhibitor, displays high active against the breast cancer cell lines MDA-MB-231 and MCF-7 (EC50s: 0.4/0.7 μM).
Targets(IC50)	Apoptosis,HSP
In vitro	JG-98 had a potency of 0.4 ± 0.03 μM against MDA-MB-231 cells and an EC50 value of 0.7 ± 0.2 μM for MCF7 cells. In MDA-MB-231 cells, the treatment of JG-98 activated apoptotic mediators (caspase-3 and PARP). Treatment of both MDA-MB-231 and MCF7 cells with JG-98 strongly affected autophagic flux [1]. JG-98 has antiproliferative activity (EC50 values between 0.3 and 4 μmol/L) across cancer cell lines from multiple origins. JG-98 destabilized FoxM1 and relieved suppression of downstream effectors, including p21 and p27 [2].
In vivo	JG-98 (3 mg/kg) suppressed tumor growth in a HeLa xenograft model, though somewhat less effective [2].
Cell Research	Cell viability was determined using an MTT colorimetric assay with the following modifications. Briefly, cells (5 x 10^3) were plated into 96-well assay plates in 0.1 ml media and allowed to attach overnight. Cells were then treated with compound at various concentrations in 0.2 mL media. After the 72-hour incubation period, cells were washed in PBS (3 x 100 μL), and 10 μL MTT reagent was added with 100 μL fresh media. Cells were then incubated for 4 hr in a humidified chamber at 37 oC with 5% CO2. Insoluble formazan crystals were solubilized by addition of 0.1 mL detergent solution (4 hr at room temp., dark). Resulting colored solutions were then quantified at an absorbance of 570 nm [1].
Animal Research	Briefly, one million MCF7 or HeLa cells in Matrigel were subcutaneously injected bilaterally into 6 week old NCR mice. Once tumors were established, JG-98 (3 mg/kg; n=5) or vehicle control (1:1 PBS: DMSO; n=5) was introduced interperitoneally on days 2, 4 and 6. Tumor growth (10 tumors/5 mice) was measured by caliper every other day [2].

Solubility Information

Solubility	DMSO: 5 mg/mL (9.35 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8708 mL	9.354 mL	18.708 mL
5 mM	0.3742 mL	1.8708 mL	3.7416 mL
10 mM	0.1871 mL	0.9354 mL	1.8708 mL
50 mM	0.0374 mL	0.1871 mL	0.3742 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

Li X, et al. Analogs of the Allosteric Heat Shock Protein 70 (Hsp70) Inhibitor, MKT-077, as Anti-Cancer Agents. ACS Med Chem Lett. 2013 Nov 14;4(11).
Li X, et al. Validation of the Hsp70-Bag3 protein-protein interaction as a potential therapeutic target in cancer. Mol Cancer Ther. 2015 Mar;14(3):642-8.