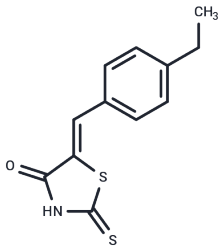
Data Sheet (Cat.No.T3048)

TargetMol

10058-F4

Chemical Properties



CAS No. : 403811-55-2

Formula: C12H11NOS2

Molecular Weight: 249.35

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	10058-F4 (c-Myc Inhibitor) is a cell-permeable thiazolidinone that specifically inhibits the c-Myc-Max interaction and prevents transactivation of c-Myc target gene expression; induces cell-cycle arrest and apoptosis.
Targets(IC50)	Autophagy,c-Myc
In vitro	10058-F4 caused AML cells to arrest in the G0/G1 phase, resulting in the down-regulation of c-Myc expression and the up-regulation of CDK inhibitors p21 and p27. Meanwhile, 10058-F4 induced apoptosis by activating the mitochondrial pathway, which resulted in the down-regulation of Bcl-2, up-regulation of Bax, release of cytochrome C from the cytoplasm, and cleavage of caspase3/7/9. In addition, 10058-F4 may induce myeloid differentiation by activating various transcription factors. Similarly, 10058-F4 induced apoptosis and differentiation of primary AML cells. 10058-F4 reduced c-Myc protein levels and inhibited proliferation of HepG2 cells, which may be related to the up-regulation of p21WAF1, a cell cycle protein-dependent kinase inhibitor, and the reduction of intracellular [alpha]-methylated fetoprotein. 10058-F4 also down-regulated the transcriptional level of human telomerase and reverse transcriptase. 10058-F4 also down-regulated the transcriptional level of human telomerase. reverse transcriptase downregulation. In addition to inhibiting the proliferation of HepG2 cells, 10058-F4 enhanced their sensitivity to conventional chemotherapeutic agents, adriamycin, 5-fluorouracil and cisplatin.
In vivo	10058-F4 caused AML cells to arrest in the G0/G1 phase, resulting in the down-regulation of c-Myc expression and the up-regulation of CDK inhibitors p21 and p27. Meanwhile, 10058-F4 induced apoptosis by activating the mitochondrial pathway, which resulted in the down-regulation of Bcl-2, up-regulation of Bax, release of cytochrome C from the cytoplasm, and cleavage of caspase3/7/9. In addition, 10058-F4 may induce myeloid differentiation by activating various transcription factors. Similarly, 10058-F4 induced apoptosis and differentiation of primary AML cells. 10058-F4 reduced c-Myc protein levels and inhibited proliferation of HepG2 cells, which may be related to the up-regulation of p21WAF1, a cell cycle protein-dependent kinase inhibitor, and the reduction of intracellular [alpha]-methylated fetoprotein. 10058-F4 also down-regulated the transcriptional level of human telomerase and reverse transcriptase. 10058-F4 also down-regulated the transcriptional level of human telomerase. reverse transcriptase downregulation. In addition to inhibiting the proliferation of HepG2 cells, 10058-F4 enhanced their sensitivity to conventional chemotherapeutic agents, adriamycin, 5-

In vivo	fluorouracil and cisplatin.
Cell Research	Cells, plated in 96-well plates (105/mL for cell lines and 5 × 105/mL for primary leukemic cells), are treated in triplicate with indicated concentrations of 10058-F4. At various time points, 20 μL 5 mg/mL MTT is added to each well. After incubation at 37°C for 3 hours, the MTT medium is removed and 100 μL DMSO lysis buffer is added. The number of viable cells is assessed by the percentage of absorbance of treated cells relative to that of solvent controls, using 570-nm wavelength on a spectrophotometer.(Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 65 mg/mL (260.68 mM),Sonication is recommended. Ethanol: 5 mg/mL (20.05 mM),Sonication 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: 1 mg/mL (4.01 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	4.0104 mL	20.0521 mL	40.1043 mL
5 mM	0.8021 mL	4.0104 mL	8.0209 mL
10 mM	0.401 mL	2.0052 mL	4.0104 mL
50 mM	0.0802 mL	0.401 mL	0.8021 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

Huang MJ, et al. Exp Hematol, 2006, 34(11), 1480-1489.
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He Q, Zhang Y, Li W, et al.Inhibition of PRMT5 moderately suppresses prostate cancer growth in vivo but enhances its response to immunotherapy.Cancer Letters.2024: 217214.

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