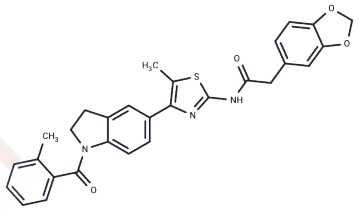
Data Sheet (Cat.No.T4360)

TargetMol

ML385

Chemical Properties



CAS No. : 846557-71-9

Formula: C29H25N3O4S

Molecular Weight: 511.59

Storage: 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	ML385 is an NRF2 inhibitor (IC50=1.9 μM) with novelty and specificity. ML385 has anti-inflammatory activity by modulating anti-oxidative stress through the inhibition of NRF2. ML385 also exhibits anti-tumor activity.
Targets(IC50)	Ferroptosis,Nrf2
In vitro	**METHODS**: Human lung cancer cells A549 were treated with ML385 (0.25-5 μM) for 12-72 h. The expression levels of target genes were detected by RT-qPCR. **RESULTS**: ML385 dose-dependently and time-dependently decreased the transcriptional activity of NRF2. [1] **METHODS**: Human lung cancer cells EBC1 were treated with ML385 (1-25 μM) for 48 h, and the expression levels of target proteins were detected by Western Blot. **RESULTS**: NRF2 expression was inhibited by treatment with 5 μM ML385. When the concentration of ML385 was increased above 5 μM, the NRF2 protein level was restored. [2]
In vivo	**METHODS**: To detect anti-tumor activity in vivo, ML385 (30 mg/kg) and carboplatin (5 mg/kg) were intraperitoneally injected into athymic nude mice harboring human lung cancer tumors A549 or H460 five times a week for three weeks. **RESULTS**: Treatment with ML385 in combination with carboplatin showed a significant reduction in tumor growth. Although treatment with a single agent resulted in a reduction in tumor growth, the magnitude of these effects was variable between cell lines and did not reach statistical significance. [1] **METHODS**: To investigate whether Nrf2 modulates acute liver failure (ACLF) through iron death, ML385 (30 mg/kg) was injected intraperitoneally four times per week for four weeks into BALB/c mice constructed in the ACLF model. **RESULTS**: More severe histopathological lesions were observed in the ML385 group compared to the ACLF group. lipid peroxidation and liver injury were exacerbated by the Nrf2 inhibitor, ML385. [3]
Cell Research	cells are treated with ML385 for 36 h. An equal amount of CellTiter-Blue reagent is added to the wells and the fluorescence is measured after 30 min. The CellTiter-Blue reagent is discarded and the Caspase-Glo (100 μL) reagent is added to the cells and incubated at 37°C for an additional 60-90 min. The resulting luminescence is recorded and the caspase activity is normalized to cell number

Animal Research	Mice tumor xenografts are administered intraperitoneally ML385 (30 mg/kg).

Solubility Information

Solubility	DMSO: 50 mg/mL (97.73 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: 3 mg/mL (5.86 mM),Suspension. 50% PEG300+50% Saline: 5 mg/mL (9.77 mM),Suspension. *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	1.9547 mL	9.7735 mL	19.5469 mL
5 mM	0.3909 mL	1.9547 mL	3.9094 mL
10 mM	0.1955 mL	0.9773 mL	1.9547 mL
50 mM	0.0391 mL	0.1955 mL	0.3909 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

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