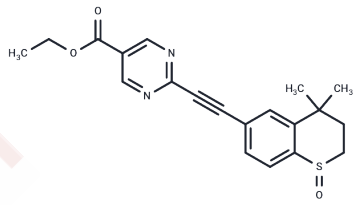
Data Sheet (Cat.No.T5341)

TargetMol

WYC-209

Chemical Properties



CAS No. : 2131803-90-0

Formula: C20H20N2O3S

Molecular Weight: 368.45

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	WYC-209 inhibits proliferation of malignant murine melanoma tumor-repopulating cells (TRCs, IC50: 0.19 uM). It targets the retinoic acid receptor (RAR).
Targets(IC50)	Apoptosis,Retinoid Receptor,Autophagy
In vitro	WYC-209 inhibits proliferation of malignant murine melanoma tumor-repopulating cells (TRCs), with an IC50 of 0.19?μM in a dose-dependent manner. WYC-209 also inhibits proliferation of TRCs of human melanoma, lung cancer, ovarian cancer, and breast cancer in culture.
In vivo	WYC-209 abrogates 87.5% of lung metastases of melanoma TRCs in immune-competent wild-type C57BL/6 mice at 0.22?mg?kg-1 without showing apparent toxicity.
Cell Research	Cell proliferation rate was measured by using MTT colorimetric assay. Cells were seeded in 3D soft fibrin gel in 96-well microplates at a density to maintain control (untreated) cells in an exponential phase of growth during the entire experiment. Cells were incubated with various concentrations of compounds for each time point followed by incubation with 50?μL MTT reagent for 3?h at 37?°C. After incubation, 150?μL MTT solvent was added and absorbance was measured at 570?nm. All experiments were repeated at least three times. The percentage of viable cells was calculated and averaged for each well: percent growth?=?(OD-treated cells/OD control cells)?×?100, cell proliferation at each time point is normalized to base line cell survival at the time of initial compound treatment (day 0).
Animal Research	Four- to six-week-old female and male C57BL/6 mice were used in mice experiment. Mice were randomized into different groups. In metastasis experiment, B16-F1 cell spheroids were selected from 3D 90-Pa fibrin gels and pipetted to single cells. These TRCs were harvested and the cell number was counted under microscopy. The cells were then suspended in PBS with appropriate cell density. Thirty thousand TRCs were intravenously injected into the tail vein of each wild-type C57BL/6 mouse. Five days later, inoculated mice were intravenous implanted with 0.022?mg/kg WYC-209, 0.22?mg/kg WYC-209, or 0.1% DMSO every two days. The mice were euthanized and examined for lung tumor formation at day 30. In treated TRCs injected in vivo experiments, B16-F1 cells were seeded into 3D 90-Pa fibrin gels and treated with 10?μM WYC-209 or 0.1% DMSO on day 3, then isolated treated TRCs colonies on day 5 and pipetted into single cell. 30,000 of TRCs were intravenously injected into the tail vein of each wild-type C57BL/6 mouse. No blinding was performed in the mice experiments.

Solubility Information

Solubility	DMSO: 80 mg/mL (217.13 mM),Sonication is recommended. H2O: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (8.96 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	2.7141 mL	13.5704 mL	27.1407 mL
5 mM	0.5428 mL	2.7141 mL	5.4281 mL
10 mM	0.2714 mL	1.357 mL	2.7141 mL
50 mM	0.0543 mL	0.2714 mL	0.5428 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

Chen J, et al. Inhibition of cancer stem cell like cells by a synthetic retinoid. Nat Commun. 2018 Apr 11;9(1):1406.