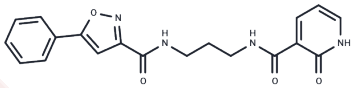
Data Sheet (Cat.No.T4252)

TargetMol

ML327

Chemical Properties



CAS No. : 1883510-31-3

Formula: C19H18N4O4

Molecular Weight: 366.37

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	ML327 is a MYC blocker. ML327 can also de-repress E-cadherin transcription and reverse Epithelial-to-Mesenchymal Transition (EMT).
Targets(IC50)	Autophagy,c-Myc,Cadherin
In vitro	ML327 partially restores E-cadherin expression at the plasma membrane in NMuMG cells induced to undergo Epithelial-to-Mesenchymal Transition (EMT) by TGF-β1 treatment. Treatment with ML327 induces an elongated morphology in neuroblastoma cells. BE(2)-C cells treated with ML327 demonstrates G1 cell cycle arrest with a concordant decrease in S phase population, and a significant increase in the sub G0 population. ML327 induces the expression of CDH1 in all seven of the neuroblastoma cell lines with a 50 to 1,400-fold induction of CDH1 mRNA expression. ML327 blocks the expression of MYC family of oncogenic transcription factors in all tested neuroblastoma cell lines. Immunoblotting time course demonstrates early repression of N-MYC expression within 2 h of treatment with ML327 (10 μM). p53 levels are also suppressed by treatment with ML327.
In vivo	Treatment with ML327 leads to a significant reduction in MYCN expression, evidenced by a two-fold decrease, thus verifying its inhibitory effect on xenograft MYCN expression (p=0.0035). Furthermore, ML327 markedly diminishes tumor volume, achieving a three-fold reduction over a two-week period (p=0.02), and similarly, tumor explant weights in ML327-treated mice are approximately three-fold lighter compared to those in control mice (p=0.01). Additionally, ML327 administration results in a 12% greater loss of body weight in treated mice compared to those receiving the vehicle.
Cell Research	ML327 is solubilized in DMSO for in vitro experiments.Cells are seeded onto 96-well plates at equivalent density (3,000 to 10,000 depending upon cell line), permitted to attach overnight, and treated with either ML327 (10 μM) or vehicle. Daily absorbance measurements (450 nm) using the cell counting kit are obtained. For estimation of IC50 values, cells are plated at equal density, permitted to attach, and baseline absorbance is obtained using cell counting kit. Cells are then treated with varying doses of ML327 (0.1 to 30 μM) and cell viability is measured 72 h after treatment.
Animal Research	ML327 is solubilized in 70% polyethylene glycol for in vivo experiments.Male athymic nude mice (4 to 6 weeks old) are maintained as described. BE(2)-C cells xenografts are established as previously described. 1×106 cells/100 μL of HBSS is injected subcutaneously into flanks using a 26-gauge needle (n=10 per group). Mice are

Animal Research	monitored daily for xenograft formation and assessed by measuring the two greatest perpendicular tumor diameter with venier calipers. Xenograft volumes are estimated using the following formula [(length×width2)/2]. Once tumors reach 75 to 100 mm3, mice are randomized to receive either 50 mg/kg of ML327 or control vehicle (70% polyethylene glycol) via intraperitoneal injection twice daily for 14d. Weight and tumor volume are recorded daily. After completion of two weeks of treatment, mice are euthanized and tumors are excised, weighed, and RNA is isolated.

Solubility Information

Solubility	DMSO: 13.75 mg/mL (37.53 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: 2 mg/mL (5.46 mM) *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	2.7295 mL	13.6474 mL	27.2948 mL
5 mM	0.5459 mL	2.7295 mL	5.459 mL
10 mM	0.2729 mL	1.3647 mL	2.7295 mL
50 mM	0.0546 mL	0.2729 mL	0.5459 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

Rellinger EJ, et al. Isoxazole compound ML327 blocks MYC expression and tumor formation in neuroblastoma. Oncotarget. 2017 Jul 20;8(53):91040-91051.

An H, et al. Small molecule/ML327 mediated transcriptional de-repression of E-cadherin and inhibition of epithelial-to-mesenchymal transition.Oncotarget. 2015 Sep 8;6(26):22934-48.

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