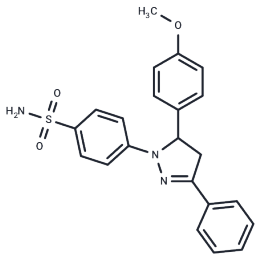
Data Sheet (Cat.No.T2463)

TargetMol

ML141

Chemical Properties



CAS No. : 71203-35-5

Formula: C22H21N3O3S

Molecular Weight: 407.49

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	ML141 (CID-2950007) is an effective, specific and reversible non-competitive inhibitor of Rho family GTPase cdc42 (IC50: 200 nM).
Targets(IC50)	Apoptosis,CDK,Ras
In vitro	In NOD/SCID mice carrying MDA-MB 231-derived tumors, ML141 (1 mg/day, intraperitoneally) inhibits the growth of these tumors by suppressing Cdc42, thereby enhancing the effectiveness of TMX. Additionally, ML141 (10 mg/kg, intraperitoneally) increases the mobilization of hematopoietic stem and progenitor cells induced by granulocyte colony-stimulating factors.
In vivo	ML141 significantly protects against apoptosis damage induced by metformin in neuroblastoma. It enhances the ability of caffeine to inhibit cell growth through the induction/suppression of cell death/division. Additionally, ML141 dose-dependently reduces the invasion of Klebsiella pneumoniae.
Kinase Assay	Equilibrium binding assay : Wild-type GST-Cdc42 (4 μM) is bound to GSH-beads overnight at 4°C. Cdc42 on GSH-beads is depleted of nucleotide by incubating with 10 mM EDTA containing buffer for 20 min at 30°C, washing twice with NP- HPS buffer, then re-suspended in the same buffer containing 1 mM EDTA/or 1 mM MgCl2, 1 mM DTT and 0.1% BSA. Cdc42 unbound sites are blocked by incubation of protein-bead complex for 15 min at RT. Thirty μL of this suspension is incubated with 20 mM inhibitor for 3 min at RT and added 30 μL of various concentrations of ice cold BODIPY-FL-GTP. Samples incubated at 4° C for 45 min and binding of fluorescent nucleotide to enzyme is measured using an Accuri flow cytometer. Raw data are exported and plotted using GraphPad Prism software.
Cell Research	Cells are incubated with 500 nM Calcein-AM and 1 μM PI for 15 min, after which live cells and dead cells (represented by positivity of Calcein-AM and PI staining, respectively) are counted utilizing the adherent cell Celigo™ cytometer. (Only for Reference)

Solubility Information

Solubility	DMSO: 125 mg/mL (306.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.454 mL	12.2702 mL	24.5405 mL
5 mM	0.4908 mL	2.454 mL	4.9081 mL
10 mM	0.2454 mL	1.227 mL	2.454 mL
50 mM	0.0491 mL	0.2454 mL	0.4908 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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