ML141

Cat. No.: HY-12755

CAS No.: 71203-35-5

Molecular Formula: $C_{22}H_{21}N_3O_3S$

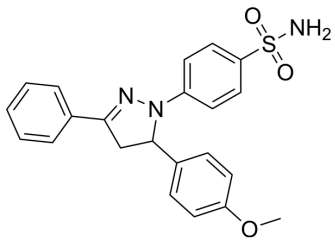
Molecular Weight: 407.49

Target: Ras; Apoptosis

Pathway: GPCR/G Protein; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 55 mg/mL (134.97 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4540 mL	12.2702 mL	24.5405 mL
	5 mM	0.4908 mL	2.4540 mL	4.9081 mL
	10 mM	0.2454 mL	1.2270 mL	2.4540 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.14 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (5.10 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ML141 (CID-2950007) is a potent, allosteric, selective and reversible non-competitive inhibitor of Cdc42 GTPase. ML141 inhibits Cdc42 wild type and Cdc42 Q61L mutant with EC_{50}s of 2.1 and 2.6 μM, respectively. ML141 shows low micromolar potency and selectivity against other members of the Rho family of GTPases (Rac1, Rab2, Rab7). ML141 do not show cytotoxicity in multiple cell lines[1][2].

In Vitro

ML141 (CID-2950007) is not cytotoxic in either cell line at doses of 0.1-3 μM after treatment for 4 days. OVCA429 cells were

	insensitive to 10 μM compound, whereas some cytotoxicity was observed in SKOV3ip cells at this concentration after a 4-day treatment, although it did not reach statistical significance. ML141 is not cytotoxic toward Swiss 3T3 or Vero E6 cells up to 10 μM for 24 and 48 h, respectively[1]. ML141 inhibits 3T3 fibroblast filopodia formation and inhibits ovarian cancer cell migration[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	ML141 (CID-2950007) (10 μM; intracerebroventricular injection) causes acute anxiety in mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57Bl/6J mice[3]
Dosage:	10 μM
Administration:	Intracerebroventricular injection
Result:	Increased anxiety in mice.

CUSTOMER VALIDATION

- Sci Bull. 2023 Aug 15.
- Nat Commun. 2023 Jan 30;14(1):478.
- Nat Commun. 2022 Nov 11;13(1):6840.
- Br J Cancer. 2022 Nov 1.
- Cell Biosci. 2023 Jan 20;13(1):13.

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REFERENCES

[1]. Hong L, et al. Characterization of a Cdc42 protein inhibitor and its use as a molecular probe. J Biol Chem. 2013 Mar 22;288(12):8531-43.

[2]. Surviladze Z, et al. A Potent and Selective Inhibitor of Cdc42 GTPase. Probe Reports from the NIH Molecular Libraries Program

[3]. Hanin G, et al. Competing targets of microRNA-608 affect anxiety and hypertension. Hum Mol Genet. 2014 Sep 1;23(17):4569-80.

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