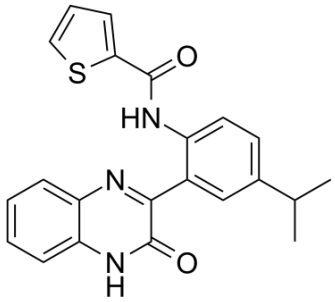
ML281

Cat. No.:	HY-13495		
CAS No.:	1404437-62-2		
Molecular Formula:	$C_{22}H_{19}N_3O_2S$		
Molecular Weight:	389.47		
Target:	Others		
Pathway:	Others		
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 : ≥ 30 mg/mL (77.03 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5676 mL	12.8380 mL	25.6759 mL
5 mM	0.5135 mL	2.5676 mL	5.1352 mL
10 mM	0.2568 mL	1.2838 mL	2.5676 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ML281 is a potent and selective STK33 inhibitor with IC50 of 14 nM. ML281 showed a 550-fold selectivity over AurB and greater than 700-fold selectivity over PKA.target: STK33IC50: 14 nM [1]ML281 showed low nanomolar inhibition of purified recombinant STK33 and a distinct selectivity profile as compared to other STK33 inhibitors. Even at the highest concentration tested (10 μM), ML281 had no effect on the viability of KRAS-dependent cancer cells. [2]

In Vitro

ML281 (10 μM; 72 hours) suppresses cell viability of NCI-H446 cells[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	NCI-H446 cells
Concentration:	10 μM
Incubation Time:	72 hours
Result:	Suppressed cell viability of NCI-H446 cells.

CUSTOMER VALIDATION

- Nat Commun. 2019 Sep 19;10(1):4266.

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REFERENCES

[1]. We?wer M et al. A Potent and Selective Quinoxalinone-Based STK33 Inhibitor Does Not Show Synthetic Lethality in KRAS-Dependent Cells. ACS Med Chem Lett, 2012 Dec 13, 3(12):1034-1038.

[2]. Spoonamore J et al. Screen for Inhibitors of STK33 Kinase Activity. National Center for Biotechnology Information (US); 2010-2011 Dec 16.

[3]. Sun EL, et al. Knockdown of human serine/threonine kinase 33 suppresses human small cell lung carcinoma by blocking RPS6/BAD signaling transduction. Neoplasma. 2017;64(6):869-879.

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