MPI-0479605

Cat. No.: HY-12660

CAS No.: 1246529-32-7

Molecular Formula: $C_{22}H_{29}N_7O$

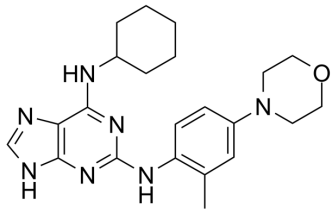
Molecular Weight: 407.51

Target: Mps1; Apoptosis

Pathway: Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 11 mg/mL (26.99 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4539 mL	12.2696 mL	24.5393 mL
	5 mM	0.4908 mL	2.4539 mL	4.9079 mL
	10 mM	0.2454 mL	1.2270 mL	2.4539 mL

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

BIOLOGICAL ACTIVITY

Description

MPI-0479605 is a potent and selective ATP-competitive inhibitor of Mps1, with an IC_{50} of 1.8 nM.

IC_{50} & Target

Mps1 1.8 nM (IC_{50})	ALK 0.26 μM (IC_{50})	B-RAF 3.2 μM (IC_{50})	ERK2 3.9 μM (IC_{50})
FAK1 2.7 μM (IC_{50})	FER 0.59 μM (IC_{50})	FLT3 0.08 μM (IC_{50})	INSR 0.38 μM (IC_{50})
JNK1 0.11 μM (IC_{50})	PLK4 3.3 μM (IC_{50})	STK33 1.1 μM (IC_{50})	

In Vitro

MPI-0479605 is a potent and selective ATP-competitive inhibitor of Mps1, with an IC_{50} of 1.8 nM. MPI-0479605 (0.1-10 μM) reduces cell viability of HCT-116 cells in a dose-dependent manner. MPI-0479605 shows severe defects in the ability to align chromosomes at the metaphase plate, but causes complete cytokinesis[1].

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

In Vivo	MPI-0479605 (30 mg/kg daily or 150 mg/kg every fourth day (Q4D), i.p.) inhibits tumor growth by 49% and 74 % in HCT-116 xenografts. However, MPI-0479605 does not show inhibitory activity via daily dosing on the Colo-205 xenografts, and dosing every four days causes 63% tumor growth inhibition (TGI)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	HCT-116 or Colo-205 cells are transplanted subcutaneously into the flanks of nude (nu^+/nu^+) mice and compound (MPI-0479605) treatment is initiated when tumor masses reaches an average size of 100 mm^3. MPI-0479605 is formulated in 5% dimethylacetamide (DMA)/12% ethanol/40% PEG-300, ispinesib is formulated in 2% cremaphor/2% DMA, and 5-fluorouracil is formulated in 2% sodium bicarbonate. Tumor volume is measured using vernier calipers and tumor growth inhibition (TGI) is calculated as: %TGI= 100-100(change in median tumor volume of treated)/(change in median tumor volume control) [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nature. 2021 Feb;590(7846):486-491.
- Breast Cancer Res Treat. 2023 Sep 11.
- bioRxiv. 2020 Jun.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Tardif KD, et al. Characterization of the cellular and antitumor effects of MPI-0479605, a small-molecule inhibitor of the mitotic kinase Mps1. Mol Cancer Ther. 2011 Dec;10(12):2267-2275.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA