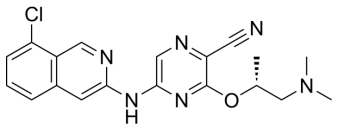
SAR-020106

Cat. No.:	HY-100195
CAS No.:	1184843-57-9
Molecular Formula:	$C_{19}H_{19}ClN_6O$
Molecular Weight:	382.85
Target:	Checkpoint Kinase (Chk)
Pathway:	Cell Cycle/DNA Damage
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 : 5 mg/mL (13.06 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6120 mL	13.0599 mL	26.1199 mL
	5 mM	0.5224 mL	2.6120 mL	5.2240 mL
	10 mM	0.2612 mL	1.3060 mL	2.6120 mL

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

BIOLOGICAL ACTIVITY

Description

SAR-020106 is an ATP-competitive, potent, and selective CHK1 inhibitor with an IC_{50} of 13.3 nM for human CHK1. SAR-020106 shows excellent selectivity over CHK2. SAR-020106 significantly enhances the cell killing of Gemcitabine and SN38 by 3- to 29-fold in several colon tumor lines and in a p53-dependent fashion. SAR-020106 can enhance antitumor activity with selected anticancer agents[1][2].

IC_{50} & Target

Chk1
13.3 nM (IC_{50})

In Vitro

SAR-020106 (0.1-1 μM; 23 hours) abrogates an Etoposide-induced S and G2 arrest[1].
SAR-020106 is capable of abrogating Etoposide-induced cell cycle arrest with an IC_{50} of 55 nM and 91 nM in HT29 and SW620 cells, respectively. SAR-020106 is relatively nontoxic with a GI_{50} of 0.48 μM in HT29 and 2 μM in SW620, resulting in an activity index of 8.7 and 22, respectively. SAR-020106 inhibits cytotoxic drug-induced autophosphorylation of CHK1 at S296 and blocks the phosphorylation of CDK1 at Y15 in a dose-dependent fashion[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

SAR-020106 (40 mg/kg; i.p.; administered on days 0, 1, 7, 8, 14, and 15) in combination with Irinotecan potentiates the antitumor activity in SW620 xenografts[1].

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

Animal Model:	Nude mice bearing SW620 xenograft tumors[1]
Dosage:	40 mg/kg
Administration:	I.p.; administered on days 0, 1, 7, 8, 14, and 15
Result:	There was a clear decrease in tumor growth associated with the combination with tumors reaching 300% by 12.5 days.

REFERENCES

[1]. Walton MI, et al. The preclinical pharmacology and therapeutic activity of the novel CHK1 inhibitor SAR-020106. Mol Cancer Ther. 2010;9(1):89-100.

[2]. Reader JC, et al. Structure-guided evolution of potent and selective CHK1 inhibitors through scaffold morphing. J Med Chem. 2011;54(24):8328-8342.

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