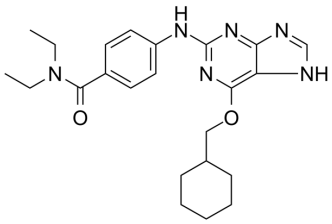
NU6140

Cat. No.:	HY-107419
CAS No.:	444723-13-1
Molecular Formula:	$C_{23}H_{30}N_6O_2$
Molecular Weight:	422.52
Target:	CDK; Aurora Kinase
Pathway:	Cell Cycle/DNA Damage; Epigenetics
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 : 250 mg/mL (591.69 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3668 mL	11.8338 mL	23.6675 mL
	5 mM	0.4734 mL	2.3668 mL	4.7335 mL
	10 mM	0.2367 mL	1.1834 mL	2.3668 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.92 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.92 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NU6140 is a selective CDK2-cyclin A inhibitor (IC_{50}, 0.41 μM), exhibits 10- to 36-fold selectivity over other CDKs[1]. NU6140 also potently inhibits Aurora A and Aurora B, with IC_{50}s of 67 and 35 nM, respectively[2]. Enhances the apoptotic effect, with anti-cancer activity[1][2].

IC_{50} & Target

cdk2-cyclin A 0.41 μM (IC_{50})	CDK1-Cyclin B 6.6 μM (IC_{50})	CDK4-Cyclin D 5.5 μM (IC_{50})	cdk5-p25 15 μM (IC_{50})
cdk7-cyclin H 3.9 μM (IC_{50})	Aurora A 67 nM (IC_{50})	Aurora B 35 nM (IC_{50})	

In Vitro	NU6140 is less active on CDK1-cyclin B, CDK4-cyclin D, CDK5-p25 and CDK7-cyclin H, with IC_{50}s of 6.6, 5.5, 15 and 3.9 μM, respectively[1]. NU6140 increases catalytic activity of capase-9 and capase-3, causes increase in the sub-G1 apoptotic cell population[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- bioRxiv. 2019 Jan.

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REFERENCES

[1]. Pennati M, et al. Potentiation of apoptosis by the novel cyclin-dependent kinase inhibitor NU6140: a possible role for survivin down-regulation. Mol Cancer Ther. 2005 Sep;4(9):1328-37.

[2]. Jorda R, et al. How Selective Are Pharmacological Inhibitors of Cell-Cycle-Regulating Cyclin-Dependent Kinases? Med Chem. 2018 Oct 25;61(20):9105-9120.

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