CDK9-IN-7

Cat. No.: HY-126251

CAS No.: 2369981-71-3

Molecular Formula: $C_{29}H_{37}N_7O_2S$

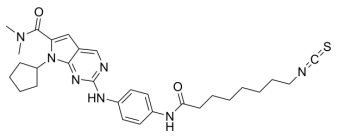
Molecular Weight: 547.71

Target: CDK; Apoptosis

Pathway: Cell Cycle/DNA Damage; 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 : 62.5 mg/mL (114.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8258 mL	9.1289 mL	18.2578 mL
	5 mM	0.3652 mL	1.8258 mL	3.6516 mL
	10 mM	0.1826 mL	0.9129 mL	1.8258 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: ≥ 2.08 mg/mL (3.80 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CDK9-IN-7 (compound 21e) is a selective, highly potent, and orally active CDK9/cyclin T inhibitor (IC_{50}=11 nM), which exhibits more potent over other CDKs (CDK4/cyclinD=148 nM; CDK6/cyclinD=145 nM). CDK9-IN-7 shows antitumor activity without obvious toxicity. CDK9-IN-7 induces NSCLC cell apoptosis, arrests the cell cycle in the G2 phase, and suppresses the stemness properties of NSCLC[1].

IC_{50} & Target

CDK9/cyclinT1	CDK4/cyclin D	CDK6/cyclinD
11 nM (IC_{50})	148 nM (IC_{50})	145 nM (IC_{50})

In Vitro

CDK9-IN-7 displays exceptional potency against NSCLC cell lines, especial A549 and H1299 with IC_{50} values less than 0.5 μM. In the drug-resistant NSCLC cell line H1975, CDK9-IN-7 also exhibits good inhibition potency with an IC_{50} value of 0.837 μM[1]

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

REFERENCES

[1]. Wang X, et al. Novel cyclin-dependent kinase 9 (CDK9) inhibitor with suppression of cancer stemness activity against non-small-cell lung cancer. Eur J Med Chem. 2019 Jul 25;181:111535.

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