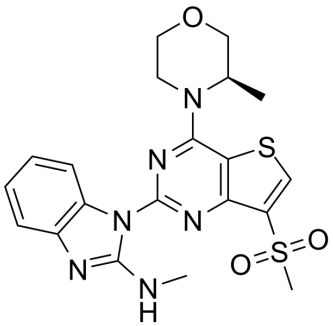
ATR-IN-23

Cat. No.:	HY-149952
CAS No.:	2923800-62-6
Molecular Formula:	$C_{20}H_{22}N_6O_3S_2$
Molecular Weight:	458.56
Target:	ATM/ATR
Pathway:	Cell Cycle/DNA Damage; PI3K/Akt/mTOR
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

ATR-IN-23 (Compound 34) is a potent and selective ATR inhibitor with an IC_{50} of 1.5 nM. ATR-IN-23 has potent antiproliferative effects on LoVo cells and synthetic lethality on HT-29 cells, and can be used in the study of DNA damage response (DDR)-deficient cancers[1].

In Vitro

ATR-IN-23 possesses significant inhibitory potency against ATR, with an IC_{50} value of 1.5 nM, and displays strong antiproliferative activities against LoVo cells, with an IC_{50} value of 0.073 μM[1].
ATR-IN-23 exhibits moderate antiproliferative potency against HT-29 cells with an IC_{50} value of 0.161 μM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

ATR-IN-23 shows acute toxicity at a maximum concentration of 2000 mg/kg and possesses moderate safety in ICR mice[1].
ATR-IN-23 (50 mg/kg; once a day or twice a day; p.o.; 21 days) exhibits moderate antitumor efficacy in BALB/c nude mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	BALB/c nude mice[1]
Dosage:	50 mg/kg
Administration:	p.o., once a day or twice a day for 21 consecutive days, dissolved in a solution of DMSO (10%), solutol (10%), and saline (80%)
Result:	Exhibited moderate antitumor efficacy, with a tumor growth inhibition (TGI) value of 55% at dosages of 50 mg/kg twice a day.

REFERENCES

[1]. Duan Y, et al. Discovery of Thieno[3,2-d]pyrimidine derivatives as potent and selective inhibitors of ataxia telangiectasia mutated and Rad3 related (ATR) kinase. Eur J Med Chem. 2023 Jul 5;255:115370.

Caution: Product has not been fully validated for medical applications. For research use only.

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