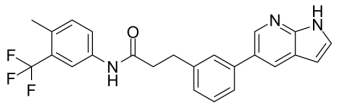
CDK8-IN-9

Cat. No.:	HY-151255
CAS No.:	2850253-95-9
Molecular Formula:	$C_{24}H_{20}F_3N_3O$
Molecular Weight:	423.43
Target:	CDK
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

CDK8-IN-9 (compound 22) is a potent type II CDK8 inhibitor with an IC_{50} value of 48.6 nM. CDK8-IN-9 can inhibit tumor growth and is used in colorectal cancer studies[1].

In Vitro

CDK8-IN-9 (compound 22) (0-100 μM, 48 h) can significantly inhibit cell proliferation and target CDK8 to inhibit the activation of the WNT/β-catenin pathway, thereby suppressing β-catenin-mediated transcriptional activity of TCF/ LEF[1].
CDK8-IN-9 (compound 22) (0.5,1 and 2 μM, 24 h) induces G2/M and S-phase cell cycle arrest, thereby inhibiting cell proliferation rather than inducing apoptosis[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HCT-116, HT-29, SW-480, CT-26 and GES-1 cells
Concentration:	0-100 μM
Incubation Time:	48 hours
Result:	Inhibited HCT-116, HT-29, SW-480, CT-26 and GES-1 cells with the GI_{50} values of 4.9, 4.3, 2.1, 4.0 and 61.5 μM, respectively.

Cell Cycle Analysis[1]

Cell Line:	HCT-116 cells
Concentration:	0.5, 1, and 2 μM
Incubation Time:	24 hours
Result:	Arrested cells in G2/M phase by 17%, 20.26% and 34.45% at concentrations of 0.5, 1, and 2 μM, respectively. Showed a decrease in the G0/G1 phase and a slight increase in the S phase.

In Vivo

CDK8-IN-9 (compound 22) (p.o., 20, 40 and 80 mg/kg, daily, 3 weeks) significantly reduces in tumor volume and inhibits weight loss in mice at the concentration of 80 mg/kg in Balb/c mice infected with CT-26 murine colon cancer cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague–Dawley rats[1]
Dosage:	10 mg/kg or 5 mg/kg
Administration:	p.o. for 10 mg/kg and i.v. for 5 mg/kg
Result:	The pharmacokinetic parameters of CDK8-IN-9 (compound 22)

Parameters	$t_{1/2}$ (h)	T_{max} (h)	MRT (h)	C_{max} (μg/L)	$AUC_{0-\infty}$ (μg/L·h)	CL (L/h/kg)	F (%)
10 mg/kg (po)	1.21	0.75	2.022	497.56	783.66	9.23	39.8
5 mg/kg (iv)	1.63	-	1.756	706.29	983.09	11.32	-

REFERENCES

[1]. Xing Xing Zhang, et al. Discovery of the Novel 1H-Pyrrolo[2,3-b]pyridine Derivative as a Potent Type II CDK8 Inhibitor against Colorectal Cancer. J. Med. Chem.

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