SHR5428

Cat. No.: HY-155787

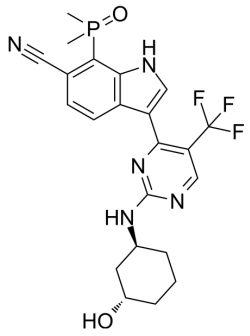
Molecular Formula: $C_{22}H_{23}F_3N_5O_2P$

Molecular Weight: 477.42

Target: CDK

Pathway: Cell Cycle/DNA Damage

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

SHR5428 is a potent, orally active, selective and noncovalent inhibitor of CDK7 with highly potent CDK7 enzymatic activity (IC_{50}=2.3 nM). SHR5428 inhibits triple negative breast cancer cellular activity on MDA-MB-468 cell (IC_{50}=6.6 nM)[1].

IC_{50} & Target

CDK7 0.005 μM (IC_{50})	CDK12 1.11 μM (IC_{50})	CDK4 3.87 μM (IC_{50})	CDK6 5.89 μM (IC_{50})
CDK9 8.30 μM (IC_{50})	CDK2 8.99 μM (IC_{50})	CDK1 >100 μM (IC_{50})	

In Vivo

SHR5428 (3-30 mg/kg, PO, once a day for 21 days) shows dose-dependent tumor growth inhibition[1].

SHR5428 (2 mg/kg, PO, once) displays favorable pharmacokinetic properties in different species such as mouse, rat and dog [1].

Pharmacokinetic Parameters of SHR5428 in mouse, rat and dog[1].

	Mouse (2 mg/kg)	Rat (2 mg/kg)	Dog (2 mg/kg)
C_{max} (ng/mL)	116	120	543
AUC (ng/mL⊠h)	139	556	4101
$t_{1/2}$ (h)	0.7	2.6	4.9
Bioavailability F%	32%	44%	
92%			

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

Animal Model:	HCC70 cell line derived xenograft NDG mouse model[1]
Dosage:	3, 10, 30 mg/kg

Administration:	PO, once a day for 21 days
Result:	Showed dose-dependent tumor growth inhibition (3 mg/kg, TGI = 39%; 10 mg/kg, TGI = 61%; 30 mg/kg, TGI = 83%).

REFERENCES

[1]. Jia M, et al. Discovery of SHR5428 as a selective and noncovalent inhibitor of CDK7. Bioorg Med Chem Lett. 2023 Sep 1;93:129429.

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