Cimpuciclib tosylate

Cat. No.: HY-112243A

CAS No.: 2408872-84-2

Molecular Formula: $C_{37}H_{43}FN_8O_4S$

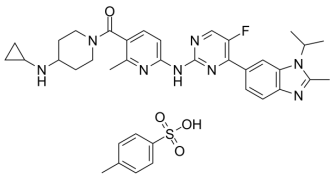
Molecular Weight: 714.85

Target: CDK

Pathway: Cell Cycle/DNA Damage

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (279.78 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3989 mL	6.9945 mL	13.9889 mL
	5 mM	0.2798 mL	1.3989 mL	2.7978 mL
	10 mM	0.1399 mL	0.6994 mL	1.3989 mL

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

BIOLOGICAL ACTIVITY

Description

Cimpuciclib tosylate is a selective CDK4 inhibitor (IC_{50}: 0.49 nM) that has anti-tumor activity[1].

IC_{50} & Target

CDK4	CDK6
0.49 nM (IC_{50})	9.56 nM (IC_{50})

In Vitro

Cimpuciclib (example 63, 141.2 nM, 6 days) tosylate inhibits proliferation of colo205 cells[1].

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

Cell Proliferation Assay[1]

Cell Line:	Colo205 cells
Concentration:	0-500 nM approximately
Incubation Time:	6 days
Result:	Inhibited cell proliferation with an IC_{50} value of 141.2 nM.

In Vivo

Cimpuciclib (example 63, 50 mg/kg, oral gavage, twice a week) tosylate inhibits tumor growth in colo205 tumor-bearing mice[1].

Cimpuciclib (5 mg/kg for rats, 50 mg/kg for colo205 tumor-bearing mice, oral administration) tosylate shows slow metabolic rate and maintains high concentration in the plasma[1].

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

Animal Model:	Colo205 tumor-bearing mice[1]
Dosage:	50 mg/kg, twice a week
Administration:	Oral gavage
Result:	Inhibited tumor growth by 93.63%

Animal Model:	Rats, colo205 tumor-bearing mice[1]
Dosage:	5 mg/kg for rats, 50 mg/kg for colo205 tumor-bearing mice.
Administration:	Oral administration
Result:	Pharmacokinetic profile of Cimpuciclib (example 63).

dose	C_{max} (ng/mL)	T_{max} (h)	AUC_{0-24} (ng/mL•h)	$t_{1/2}$ (h)
5 mg/kg (rats)	559.7	6	5414	2.4
50 mg/kg (mice)	7960	1	136782	14.8

REFERENCES

[1]. Liu Shiqiang, et al. Preparation of benzimidazole compound as kinase inhibitor. Patent WO 2018045956.

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