Padnarsertib

Cat. No.: HY-12793

CAS No.: 1643913-93-2

Molecular Formula: $C_{35}H_{29}F_3N_4O_3$

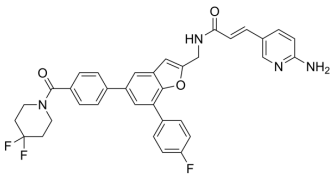
Molecular Weight: 610.63

Target: PAK; NAMPT

Pathway: Cell Cycle/DNA Damage; Cytoskeleton; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (163.77 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6377 mL	8.1883 mL	16.3765 mL
	5 mM	0.3275 mL	1.6377 mL	3.2753 mL
	10 mM	0.1638 mL	0.8188 mL	1.6377 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 (3.41 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (3.41 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Padnarsertib (KPT-9274) is an orally bioavailable, dual PAK4/Nicotinamide phosphoribosyltransferase (Nampt) inhibitor, with IC_{50}s of <100 nM and 120 nM, respectively[1][2][3].

IC_{50} & Target

PAK4	Nampt
100 nM (IC_{50})	120 nM (IC_{50})

In Vitro

Padnarsertib attenuates the PAK4/β-catenin pathway, results in NAD depletion, and attenuates viability, invasion, and

migration in several RCC cell lines. Inhibition of NAMPT in a cell-free enzymatic assay using recombinant NAMPT shows an IC_{50} of approximately 120 nM for Padnarsertib. Padnarsertib attenuates G2–M transit and induces apoptosis in RCC cell lines[2].

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

In Vivo

Padnarsertib demonstrates a decrement of xenograft growth comparable with that of Sunitinib (HY-10255A). There are minimal Padnarsertib effects on the normal human RPTECs and no apparent toxicity in vivo[2].

Padnarsertib is currently being investigated in a phase I human clinical trial of patients with advanced solid malignancies and NHL[2].

Padnarsertib (oral administation; 100mg/kg or 200 mg/kg; twice a day; 14 days) demonstrates a decrement of xenograft growth without no significant weight loss. 8 hours after, Padnarsertib are measured at the end of the experiment in mouse plasma and tumors with 10757 ng/mL and 10647 ng/mL, respectively[3].

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

Animal Model:	Mice[1]
Dosage:	100mg/kg or 200 mg/kg
Administration:	Oral administation; 100mg/kg or 200 mg/kg; twice a day; 14 days
Result:	Showed a significant decrease of xenograft growth in KPT-9274 treated mouse.

CUSTOMER VALIDATION

- Adv Sci (Weinh). 2022 Oct;9(30):e2200717.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. WO2015003166A1

[2]. Abu Aboud O, et al. Dual and Specific Inhibition of NAMPT and PAK4 By KPT-9274 Decreases Kidney Cancer Growth. Mol Cancer Ther. 2016 Sep;15(9):2119-29.

[3]. Abu Aboud O, et al. Dual and Specific Inhibition of NAMPT and PAK4 By KPT-9274 Decreases Kidney Cancer Growth.Mol Cancer Ther. 2016 Sep;15(9):2119-29.

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