MARK4 inhibitor 2

Cat. No.: HY-154986

Molecular Formula: $C_{34}H_{30}N_4O_3$

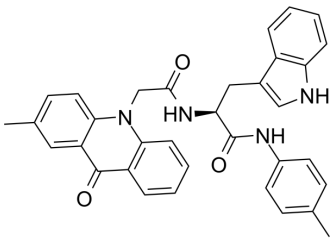
Molecular Weight: 542.63

Target: AMPK

Pathway: Epigenetics; PI3K/Akt/mTOR

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (184.29 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8429 mL	9.2144 mL	18.4288 mL
5 mM	0.3686 mL	1.8429 mL	3.6858 mL
10 mM	0.1843 mL	0.9214 mL	1.8429 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (4.61 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MARK4 inhibitor 2 is an inhibitor of microtubule affinity-regulating kinase 4 (MARK4) with an K_m of 6.3×10^{7} and an IC_{50} of 0.82 μM. MARK4 inhibitor 2 inhibits the growth of human cells and can be used for cancer research[1].

IC_{50} & Target

IC50: 0.82 μM (MARK4)[1] K_m:6.3×10^{7}[1]

In Vitro

MARK4 inhibitor 2 (Compound 23a) (0-20 μM; 24 hour) inhibits the growth of HeLa, U87MG, MDA-MB-435, U251 and HGFs cells with EC_{50}s ranging from 1.76 μM to 7.98 μM[1].

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

Cell Viability Assay[1]

Cell Line:	HeLa, U87MG, MDA-MB-435, U251, HGFs cells
Concentration:	0-20 μM

Incubation Time:	24 hours
Result:	Inhibited the growth of human cells with EC_{50} s of 2.13, 4.13, 1.76, 7.98, 3.55 μM for HeLa, U87MG, MDA-MB-435, U251, HGFs cells, respectively. Decreased the proliferation of human cancer cells in the low micromolar range; also affects the non-cancerous HGF cells.

REFERENCES

[1]. Maria Voura, et.al. Synthesis, Structural Modification, and Bioactivity Evaluation of Substituted Acridones as Potent Microtubule Affinity-Regulating Kinase 4 InhibitorsACS Pharmacology & Translational Science 2023 6 (7), 1052-1074.

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