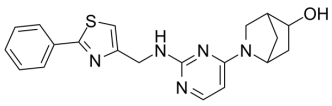
TACC3 inhibitor 1

Cat. No.:	HY-151985
CAS No.:	3033646-06-6
Molecular Formula:	$C_{20}H_{21}N_5OS$
Molecular Weight:	379.48
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

TACC3 inhibitor 1 is a potent and cross the blood-brain barrier TACC3 inhibitor. TACC3 inhibitor 1 induces Apoptosis and cell cycle arrest at G2/M phase. TACC3 inhibitor 1 induces the generation of intracellular ROS. TACC3 inhibitor 1 shows antiproliferative and anti-tumor activity[1].

In Vitro

TACC3 inhibitor 1 (compound 7g) (1, 2, 4 μM; 36 h) induces apoptosis and cell cycle arrest at G2/M phase[1].
TACC3 inhibitor 1 (1, 2, 4 μM; 36 h) decreases the mitochondrial membrane potential and induces the generation of intracellular ROS[1].
TACC3 inhibitor 1 (1, 2, 4 μM; 24 h) inhibits cell migration and invasion in U87 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	U251, U87, MDA-MB-231, JIMT-1, SKOV-3, HLF-1 cells
Concentration:	0-100 μM
Incubation Time:	24 h
Result:	Showed antiproliferative activities with IC_{50}s of 5.61, 3.29, 6.46, 4.84, 8.21, 23.11 μM for U251, U87, MDA-MB-231, JIMT-1, SKOV-3, HLF-1 cells, respectively.

Cell Cycle Analysis[1]

Cell Line:	U87 cells
Concentration:	1, 2, 4 μM
Incubation Time:	36 h
Result:	Induced cell cycle arrest at G2/M phase with the 41.2% cells at G2/M phase at 4 μM.

Apoptosis Analysis[1]

Cell Line:	U87 cells
Concentration:	1, 2, 4 μM

Incubation Time:	36 h
Result:	Induced apoptosis in a dose-dependent manner with the percentage of early apoptotic cells increased from 4.49% in control group to 21.42%, late apoptotic cells increased from 0.52% to 26.72% at 4 μM.

In Vivo

TACC3 inhibitor 1 (20 mg/kg; i.p.; daily for 20 days) shows anti-tumor activity in mouse[1].

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

Animal Model:	Six-week-old BALB/c nude mice (U87 xenograft model)[1]
Dosage:	20 mg/kg
Administration:	I.p.; daily for 20 days
Result:	Exhibited a significant tumor growth regression and no observable toxicity during the administration period and had no effects on the body weight.

REFERENCES

[1]. Zhao W, et al. Discovery of novel analogs of KHS101 as transforming acidic coiled coil containing protein 3 (TACC3) inhibitors for the treatment of glioblastoma. Eur J Med Chem. 2022 Dec 15;244:114874.

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