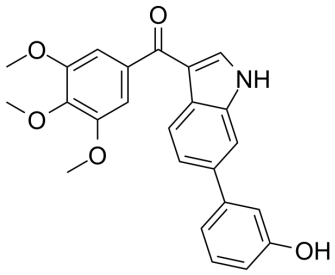
KGP591

Cat. No.:	HY-155249
CAS No.:	3018962-69-8
Molecular Formula:	$C_{24}H_{21}NO_5$
Molecular Weight:	403.43
Target:	Microtubule/Tubulin
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

KGP591 is a tubulin polymerization inhibitor (IC_{50} 0.57 μM). KGP591 induces significant G2/M stagnation, inhibits cell migration, disrupts microtubule structure and cell morphology in MDA-MB-231 cells. KGP591 shows antitumor activity in orthotopic model of kidney cancer (RENCA)[1].

In Vitro

KGP591 (100 nM, 72 h) inhibits migration and proliferation in MDA-MB-231 cells [1]>.
KGP591 (100 nM, 30 min) induces microtubule disruption in MDA-MB-231 cells[1].
KGP591 (200 nM, 48 h) shows G2/M cell cycle arrest in MDA-MB-231 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Migration Assay [1]

Cell Line:	MDA-MB-231 cells
Concentration:	100 nM
Incubation Time:	72 h
Result:	Decreased in wound width in cells and remained largely open.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	200 nM
Incubation Time:	48 h
Result:	Had an arrest of MDA-MB-231 cells at G2/M of the cell cycle.

In Vivo

Phosphate prodrug KGP618 (150 mg/kg, subcutaneous injection, 24 h) for KGP591 shows tumor-selective vascular disrupting agents (VDA) efficacy in BALB/c mice with RENCA-luc xenograft[1].
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Animal Model:	RENCA-luc xenograft in BALB/c mice[1]

Dosage:	150 mg/kg
Administration:	Subcutaneous Injection
Result:	Caused significant reduction of Bio-Layer Interferometry (BLI) signal occurred within 2.5 h. Showed necrosis and severe hemorrhage in RENCA tumor tissue.

REFERENCES

[1]. Maguire CJ, et al. Synthesis and biological evaluation of structurally diverse α-conformationally restricted chalcones and related analogues. Medchemcomm. 2019 Jun 4;10(8):1445-1456.

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