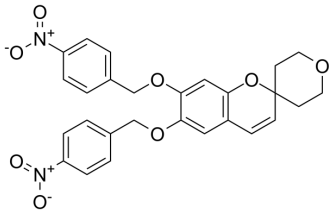
CU-CPT17e

Cat. No.:	HY-101929
CAS No.:	2109805-75-4
Molecular Formula:	$C_{27}H_{24}N_2O_8$
Molecular Weight:	504.49
Target:	Toll-like Receptor (TLR)
Pathway:	Immunology/Inflammation
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 : 5 mg/mL (9.91 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9822 mL	9.9110 mL	19.8220 mL
	5 mM	0.3964 mL	1.9822 mL	3.9644 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

CU-CPT17e is a potent multi-Toll-like receptor (TLR) agonist that activates TLR3, TLR8, and TLR9.

IC_{50} & Target	TLR3	TLR8	TLR9

In Vitro

CU-CPT17e shows strong NF-κB activation in TLR3, TLR8 and TLR9 HEK293 cells with EC_{50} values of 4.80±0.73, 13.5±0.58 and 5.66±0.17 μM, respectively. CU-CPT17e significantly improves the activity with 13.9±0.9 fold of NF-κB activation and an EC_{50} value of 4.8±0.7 μM. CU-CPT17e inhibits the proliferation of HeLa cancer cells by triggering apoptosis and arresting the cell cycle at the S phase. The induction of apoptosis by CU-CPT17e in HeLa cells is investigated. HeLa cells are cultured with increasing concentrations of CU-CPT17e or poly I:C or blank control (DMSO) for 24 h. Treatment with CU-CPT17e for 24 h at different concentrations (10 to 40 μM) results in an elevation of apoptotic cell population ranging from 10% to 17%, which is more effective than poly I:C at 5 μg/mL. These results suggest that the antiproliferative activity of CU-CPT17e against HeLa cells might result from its ability to directly induce apoptosis[1].

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

PROTOCOL

Cell Assay [1]

HeLa cells are seeded at a density of 3×10^5 cells/well in 6-well plates and allowed to attach for 24 h. After treatment of indicated concentrations of CU-CPT17e or poly I:C (5 μg/mL) for another 24 h, cells are harvested with 0.25% trypsin without EDTA and rinsed twice with PBS, then stained using a Annexin V-FITC apoptosis detection kit. Cells are analyzed with a BD Accuri C6 flow cytometer[1].

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

CUSTOMER VALIDATION

- Wound Repair Regen. 2022 May;30(3):376-396.
- Research Square Preprint. 2022 Jul.
- Research Square Preprint. 2021 Mar.

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REFERENCES

[1]. Zhang L, et al. Discovery of Small Molecules as Multi-Toll-like Receptor Agonists with Proinflammatory and Anticancer Activities. J Med Chem. 2017 Jun 22;60(12):5029-5044.

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