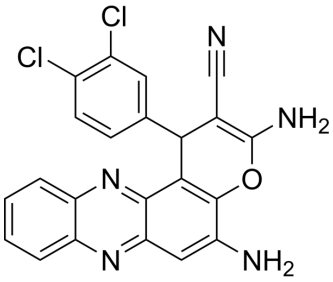
CPUL1

Cat. No.:	HY-151802
CAS No.:	2043660-80-4
Molecular Formula:	$C_{22}H_{13}Cl_2N_5O$
Molecular Weight:	434.28
Target:	TrxR
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

CPUL1 is a TrxR inhibitor, which shows proliferation-inhibitory and anti-metastatic activity against A549 cells. CPUL1 influences EMT (epithelial-mesenchymal transition) via inducing ROS-mediated ERK/JNK signaling by inhibiting TrxR1 enzyme activity. CPUL1 in combination with α-Lipoic Acid (HY-N0492) or Dithiodipropionic acid (HY-W014395) is more effective[1].

In Vitro

CPUL1 (2.5, 5, 10, 20, 40 μM; 48 h) inhibits A549 cell proliferation and (2, 4, 8 μM; 48 h) colony formation[1].
CPUL1 (4, 8 μM; 0, 24, 48 h) inhibits A549 cells migration and (2, 4, 8 μM; 48 h) invasion[1].
CPUL1 hinders EMT (epithelial-mesenchymal transition) progress and affects MAPK pathway in A549 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	A549 cells
Concentration:	2.5, 5, 10, 20, 40 μM
Incubation Time:	48 h
Result:	Showed a dose-dependent cytotoxicity, with an IC_{50} value of 7.61 μM.

Cell Viability Assay[1]

Cell Line:	A549 cells
Concentration:	2, 4, 8 μM
Incubation Time:	48 h
Result:	Significantly abolished the capacity of A5459 cells to form colonies at the dose-dependent concentration.

Cell Migration Assay [1]

Cell Line:	A549 cells
Concentration:	4, 8 μM

Incubation Time:	0, 24, 48 h
Result:	Inhibited the migration of A549 cells in a dose- and time-dependent manner.

REFERENCES

[1]. Ding Q, et al. A thioredoxin reductase 1 inhibitor pyrano [3,2-a] phenazine inhibits A549 cells proliferation and migration through the induction of reactive oxygen species production. Mol Biol Rep. 2022 Sep;49(9):8835-8845.

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