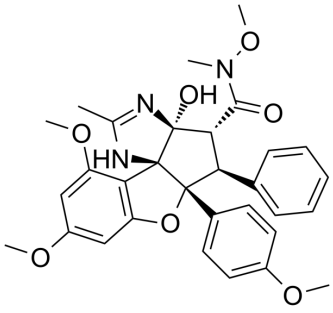
CMLD012612

Cat. No.:	HY-129767
CAS No.:	2368900-35-8
Molecular Formula:	$C_{31}H_{33}N_3O_7$
Molecular Weight:	559.61
Target:	Eukaryotic Initiation Factor (eIF)
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	CMLD012612 is an amidino-rocaglate containing a hydroxamate group and is a potent eukaryotic initiation factor 4A (eIF4A) inhibitor. CMLD012612 inhibits cell translation and is cytotoxic to NIH/3T3 cells with an IC_{50} value of 2 nM. CMLD012612 inhibits eukaryotic translation initiation by modifying the behavior of the RNA helicase (eIF4A) and possesses potent anti-neoplastic activity[1].
IC_{50} & Target	eIF4A[1]
In Vitro	The IC_{50} of CMLD012612 toward NIH/3T3 cells is 2 nM. The primary mechanism of action of CMLD012612 is dependent on eIF4A1, since eIF4A1em1jp cells are at least 10-fold more resistant than parental NIH/3T3 cells. The sensitivity of eIF4A1em1jp cells to CMLD012612 observed at higher concentrations may be due to the presence of wild-type eIF4A2 in the cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	CMLD012612 (0.5 mg/kg; intraperitoneal injection; for 3 hours; female C57BL/6 mice) treatment effectively suppresses liver polysomes 3 hours after injection, indicating inhibitory activity toward protein synthesis[1]. When administered to mice bearing myr-Akt/Em-Myc lymphomas, CMLD012612 (0.2 mg/kg; intraperitoneal injection; daily; for 5 days; female C57BL/6 mice) treatment effectively synergizes with Doxorubicin, leading to complete tumor loss[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female C57BL/6 mice[1]
Dosage:	0.5 mg/kg
Administration:	Intraperitoneal injection; for 3 hours
Result:	Effectively suppressed liver polysomes 3 hours after injection.

REFERENCES

[1]. Chu J, et al. Amidino-Rocaglates: A Potent Class of eIF4A Inhibitors. Cell Chem Biol. 2019 Nov 21;26(11):1586-1593.

Caution: Product has not been fully validated for medical applications. For research use only.

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