Product Data Sheet

Product Name: CMLD012612
Cat. No.: GC62698

Chemical Properties

Cas. No.	2368900-35-8		
Formula	$C_{31}H_{33}N_3O_7$	M.Wt	559.61
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	CMLD012612		

Background

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 IC50 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].

The IC50 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].

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].

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

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