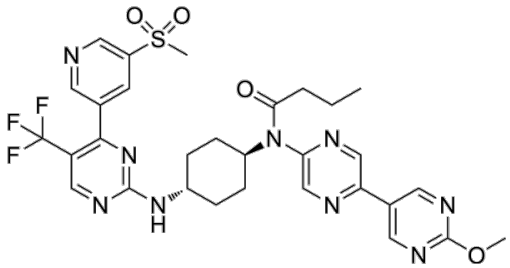
Product Data Sheet

Product Name: CTX-439
Cat. No.: GC78998

Chemical Properties

Cas. No.	2377487-13-1		
Formula	$C_{30}H_{32}F_3N_9O_4S$	M.Wt	671.69
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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			



Background

CTX-439 is an orally active, ATP-competitive small-molecule inhibitor of CDK12 and CDK13, with an IC_{50} of 3.1 nM and a K d of 0.38 nM against CDK12, and an IC_{50} of 9.2 nM against CDK13. CTX-439 induces DNA damage and apoptosis in tumor cells. CTX-439 is applicable for the research of breast cancer and ovarian cancer [1].

In Vivo, CTX-439 (7.5-30 mg/kg; p.o.; twice weekly; 15 days) inhibits the growth of SUM149PT breast cancer xenografts in nude mice in a dose-dependent manner[1].

Caution: Product has not been fully validated for medical applications. For research use only.
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In Vitro, CTX-439 (0-10 μM; 6-72 h) inhibits the proliferation of SUM149PT cells with an IC_{50} of 100.5 nM, induces DNA damage and apoptosis, and downregulates the expression of DNA damage repair genes by inhibiting CDK12 activity[1]. CTX-439 (0-1 μM; 0-24 h) downregulates MCL1 protein levels in SUM149PT and OV90 cells[1]. CTX-439 (100-800 nM; 4-8 h) synergizes with the BCL-2/BCL-xL inhibitor AZD4320 to rapidly induce apoptosis in SUM149PT and OV90 cells[1].

References:

[1]. Yamakawa H, et al. CDK12/13 inhibitor, CTX-439, suppresses tumor growth and potentiates BCL-2 family blockade. bioRxiv, 2026: 2026.02. 20.706902.

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