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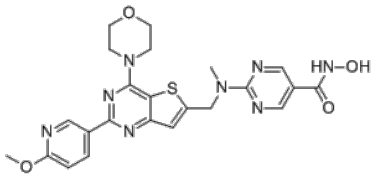
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	CUDC-907
Cat. No.	:	PC-49141
CAS No.	:	1339928-25-4
Molecular Formula	:	$C_{23}H_{24}N_8O_4S$
Molecular Weight	:	508.557
Target	:	PI3K
Solubility	:	10 mM in DMSO



Biological Activity

Fimepinostat (CUDC-907) is a potent, dual-acting **PI3K** and **HDAC** inhibitor, potently inhibits HDAC classes I and II enzymes, inhibits class I PI3K kinases with IC50 of 19, 54, and 39 nM for PI3Kα, PI3Kβ, and PI3Kδ, respectively.
CUDC-907 inhibitsthe PI3K pathway, as indicated by the dose-dependent decreases in phosphorylation of AKT and its downstream targets, 4EBP-1 and p70S6, in H460 cells.
CUDC-907 durably suppresses activation of AKT and modulates receptor tyrosine kinase, RAF-MEK-MAPK and SRC/STAT signaling via HDAC inhibition, downregulates and suppresses the activation of the SRC/STAT signaling pathway and multiple receptor tyrosine kinases.
CUDC-907 induces apoptosis and G2-M cell-cycle arrest in cancer cells, and effectively inhibits cancer cell growth (MOLT4 cell, IC50=1 nM).
CUDC-907 (25, 50, and 100 mg/kg, oral) suppresses tumor growth, inhibits HDAC activity, and blocks signaling of PI3K and MAPK pathways in xenograft models.
CUDC-907 (500 nM) exhibits enhanced adipocytic differentiation in human bone marrow stromal cells (hBMSCs).

References

Qian C, et al. ***Clin Cancer Res.*** 2012 Aug 1;18(15):4104-13.

Sun K, et al. ***Mol Cancer Ther.*** 2017 Feb;16(2):285-299.

Ali D, et al. ***Stem Cells Dev.*** 2017 Mar 1;26(5):353-362.

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