Product Data Sheet

Product Name: MC3817
Cat. No.: GC79145

Chemical Properties

Cas. No.

Formula	$C_{33}H_{41}Cl_4N_9O$	M.Wt	721.55
Solubility	DMSO: 100 mg/mL (138.59 mM; Need ultrasonic)	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

Product Data Sheet

Background

MC3817 is a selective DNMT1 inhibitor. MC3817 inhibits DNMT1 and DNMT3A/3L with IC_{50} s of 0.044 μM and > 10μM, respectively. MC3817 inhibits P53-dependent cancer cell proliferation, induces apoptosis and DNA damage MC3817 elevates cleaved Caspase 3, P53, and γH2AX. MC3817 can be used in non-small cell lung cancer, colon cancer, cervical cancer, triple-negative breast cancer and histiocytic lymphoma research [1].

In Vitro, MC3817 (compound 14) (0.05-100 μM, 48 h) exhibits antiproliferative activity against A549 and H460 (non-small cell and lung cancer), HCT-116 (colon cancer), HeLa (cervical cancer), MDA-MB-231 (triple-negative breast cancer), and U937 (histiocytic lymphoma) cells[1]. MC3817 (2 μM, 24 and 48 h) induces S/G2M phase arrest and triggers apoptotic cell death in HCT-116 cells[1]. MC3817 (0.5-5 μM, 16-48 h) triggers DNA damage and activates the p53/γH2AX pathway, leading to cell-cycle arrest and apoptosis in HCT 116 cells[1]. MC3817 (2.5 μM, 48 h) induces a much higher level of apoptosis in HCT-116 P53 WT cells compared with HCT-116 P53–/– cells [1].

References:

[1]. Zwergel C, et al. Quinoline-Based DNA Methyltransferase Inhibitors Featuring Basic Side Chains: Design, Synthesis, and Insight in Biochemical and Anticancer Cell Properties. J Med Chem. 2025 Nov 27;68(22):23886-23909.

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