

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



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

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Background

MC3817 is a selective DNMT1 inhibitor. MC3817 inhibits DNMT1 and DNMT3A/3L with IC₅₀ s of 0.044 μ M and > 10 μ M, respectively. MC3817 inhibits P53-dependent cancer cell proliferation, induces apoptosis and DNA damage MC3817 elevates cleaved Caspase 3, P53, and γ H2AX. 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 μ M, 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 μ M, 24 and 48 h) induces S/G2M phase arrest and triggers apoptotic cell death in HCT-116 cells[1]. MC3817 (0.5-5 μ M, 16-48 h) triggers DNA damage and activates the p53/ γ H2AX pathway, leading to cell-cycle arrest and apoptosis in HCT 116 cells[1]. MC3817 (2.5 μ M, 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.

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