

Topoisomerase II inhibitor 18

Chemical Properties

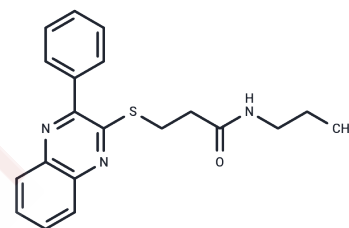
CAS No. : 2382959-65-9

Formula: C₂₀H₂₁N₃O₅

Molecular Weight: 351.47

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Topoisomerase II inhibitor 18 (Compound IV), a Quinoxaline derivative, exhibits an IC ₅₀ of 7.5 μM in inhibiting topoisomerase II. It impedes PC-3 cell proliferation, arrests the cell cycle at the S phase, and induces apoptosis. Moreover, this compound demonstrates substantial antitumor activity against cancer [1].
Targets(IC ₅₀)	Topoisomerase
In vitro	Topoisomerase II inhibitor 18 (0-100 μM) inhibits the proliferation of cancer cells PC-3 and HepG2 with IC ₅₀ values of 2.11 μM and 11.03 μM, respectively, and exhibits low cytotoxicity towards normal Vero cells (IC ₅₀ = 23.12 μM) [1]. Western Blot analysis [1] conducted on the PC-3 cell line over a 48-hour incubation period at concentrations of 0-100 μM indicates an increase in p53, cleaved caspase-3, and cleaved caspase-8 levels, and a decrease in Bcl-2 levels. Similarly, proliferation assays [1] demonstrate inhibition of cell proliferation in both HepG2 and PC-3 cell lines, under the same concentration and incubation conditions.
In vivo	Topoisomerase II inhibitor 18, administered at 5 mg/kg via intramuscular injection for 21 days, demonstrates antitumor activity and renal protective effects in an albino mice model with Ehrlich solid tumors [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8452 mL	14.226 mL	28.4519 mL
5 mM	0.569 mL	2.8452 mL	5.6904 mL
10 mM	0.2845 mL	1.4226 mL	2.8452 mL
50 mM	0.0569 mL	0.2845 mL	0.569 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481