

## CS1

## Chemical Properties

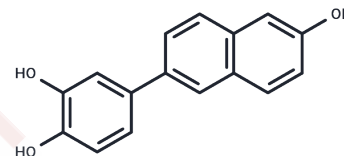
CAS No. : 1448009-94-6

Formula: C<sub>16</sub>H<sub>12</sub>O<sub>3</sub>

Molecular Weight: 252.26

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	CS1 is a potent DNA Topo II $\alpha$ inhibitor that exhibits broad-spectrum antitumor effects in vitro, low toxicity in vivo, and potential anti-multidrug resistance capabilities. CS1 induces DNA damage, G2/M phase cell cycle arrest, and apoptosis [1].
Targets(IC50)	Apoptosis,Others,Topoisomerase
In vitro	CS1 exhibits cytotoxicity with IC <sub>50</sub> values of 16.92 and 18.88 $\mu$ M for MCF-7 and MCF7/ADR cells, respectively [1]. CS1 (10, 50, 100 $\mu$ M) inhibits topoisomerase II $\alpha$ (Topo II $\alpha$ ) activity [1] and shows antiproliferative effects in cancer cells at concentrations ranging from 0-20 $\mu$ M [1]. Additionally, CS1 (2.5, 5, 10 $\mu$ M) induces G2/M phase cell cycle arrest and apoptosis [1], and at concentrations of 5, 10, and 15 $\mu$ M for 24 hours, it causes DNA breaks in MDA-MB-231 cells [1]. Cell cycle analysis with MDA-MB-231 cells at 2.5, 5, and 10 $\mu$ M concentrations revealed G2/M phase arrest, while apoptosis analysis showed induction of apoptosis [1].
In vivo	CS1, administered intravenously at a dosage of 20 mg/kg every other day for two weeks, demonstrated antitumor activity [1]. This was observed in an animal model using five-week-old female athymic nude mice (BALB/c-nu) [1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9642 mL	19.8208 mL	39.6416 mL
5 mM	0.7928 mL	3.9642 mL	7.9283 mL
10 mM	0.3964 mL	1.9821 mL	3.9642 mL
50 mM	0.0793 mL	0.3964 mL	0.7928 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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