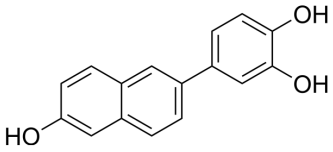
CS1

Cat. No.:	HY-137005
CAS No.:	1448009-94-6
Molecular Formula:	$C_{16}H_{12}O_3$
Molecular Weight:	252.26
Target:	Topoisomerase; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

CS1 is a potent DNA Topo II α inhibitor. CS1 displays broad-spectrum in vitro antitumor effects, low toxicity in vivo and potential anti-multidrug resistance capabilities. CS1 leads to DNA damage, cell cycle arrest at G2/M phase and apoptosis[1].

IC_{50} & Target

topoisomerase II alpha

In Vitro

CS1 shows cytotoxicity with IC_{50} values of 16.92 and 18.88 μM for MCF-7 and MCF7/ADR cells, respectively[1]
. CS1 (10, 50, 100 μM) inhibits the activity of topoisomerase II α (Topo IIα)[1].
CS1 (0-20 μM) shows antiproliferation activity in cancer cells[1].
CS1 (2.5, 5, 10 μM) induces cell cycle arrest at the G2/M phase[1].
CS1 (2.5, 5, 10 μM) induces cell apoptosis[1].
CS1 (5, 10, 15 μM; 24 h) induces DNA breaks in MDA-MB-231 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	2.5, 5, 10 μM
Incubation Time:	
Result:	Cells were arrest at the G2/M phase.

Apoptosis Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	2.5, 5, 10 μM
Incubation Time:	
Result:	Induced apoptosis

In Vivo

CS1 (20 mg/kg; i.v.; every other day for two weeks) shows antitumor effects[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Five-week-old female athymic nude mice (BALB/c-nu)[1]
Dosage:	20 mg/kg
Administration:	i.v., every other day for two weeks
Result:	Showed antitumor effects.

REFERENCES

[1]. Shen Y, et al. CS1 is a novel topoisomerase IIα inhibitor with favorable drug resistance profiles. Biochem Biophys Res Commun. 2014; 453(3):302-8.

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