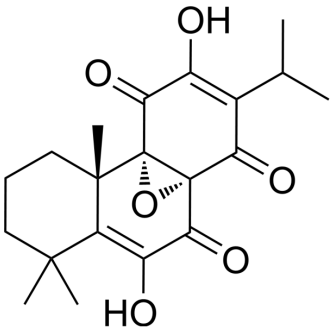
8α,9α-Epoxycoleon-U-quinone

Cat. No.:	HY-N10564
CAS No.:	93800-59-0
Molecular Formula:	$C_{20}H_{24}O_6$
Molecular Weight:	360.4
Target:	P-glycoprotein
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

8α,9α-Epoxycoleon-U-quinone (compound 3) is a p-glycoprotein (P-gp) regulator that is selective for cancer cells (SI=2.0). 8α,9α-Epoxycoleon-U-quinone effectively inhibits P-gp activity in NCI-H460/R cells. 8α,9α-Epoxycoleon-U-quinone also reverses the resistance of cancer cells to Doxorubicin (DOX) (HY-15142A) and enhances the anticancer effect of DOX[1].

In Vitro

8α,9α-Epoxycoleon-U-quinone (2, 5, 10, 20, 50 μM; 72 h) selective towards cancer cell lines, with a selectivity index of 2.0[1].
8α,9α-Epoxycoleon-U-quinone (10 μM; 72 h) is able to inhibit P-glycoprotein (P-gp) activity in NCI-H460/R cells[1].
8α,9α-Epoxycoleon-U-quinone (1, 2, 5 μM; 72 h) reverses the resistance of cancer cells to DOX and increase anti-cancer efficacy of DOX[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	NCI-H460, NCI-H460/R, MRC-5 cells
Concentration:	2, 5, 10, 20, 50 μM
Incubation Time:	72 h
Result:	Showed inhibition of cancer cell viability (IC_{50}≈20 μM) with a selectivity index of 2.0.

Cell Viability Assay[1]

Cell Line:	NCI-H460/R cells
Concentration:	10 μM
Incubation Time:	72 h
Result:	Decreased the Rho123 accumulation in NCI-H460/R cells, and no influence on the ABCB1 expression.

Cell Viability Assay[1]

Cell Line:	NCI-H460/R cells
Concentration:	1, 2, 5 μM (combine with Doxorubicin (DOX))

Incubation Time:	72 h (pre-treat)
Result:	Promoted sensitization of NCI-H4l60/R cells to DOX with relative reversal indexes of 1.976 and 4.696 for concentration of 1 and 2 μM, respectively.

REFERENCES

[1]. Ntungwe EN, et al. C20-nor-Abietane and Three Abietane Diterpenoids from Plectranthus mutabilis Leaves as P-Glycoprotein Modulators. ACS Med Chem Lett. 2022 Mar 11;13(4):674-680.

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