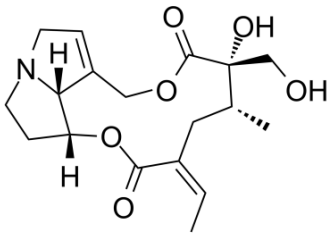
Retrorsine

Cat. No.:	HY-N6638
CAS No.:	480-54-6
Molecular Formula:	$C_{18}H_{25}NO_6$
Molecular Weight:	351.39
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Retrorsine is a naturally occurring toxic pyrrolizidine alkaloid. Retrorsine can bind with DNA and inhibits the proliferative capacity of hepatocytes[1][2].

In Vitro

Retrorsine (60-240 μM; 24 hours) significantly reduces HSEC-CYP3A4 cells viability, depletes GSH, and increases formation of pyrrole-protein adducts[3].

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

Cell Viability Assay[3]

Cell Line:	HSEC-CYP3A4 cells
Concentration:	60 μM, 120 μM , 240 μM
Incubation Time:	24 hours
Result:	Significantly decreased cell viability.

In Vivo

Retrorsine (30 mg/kg; i.p.; twice) impairs liver regeneration in the PBL model not only by an S or G2/M phase block, but also by a block located before the G1/S transition of the cell cycle[1].

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Animal Model:	Male Wistar rats (180±20 g), portal branch ligation (PBL) model[1]
Dosage:	30 mg/kg
Administration:	Intraperitoneal injection, twice, separated by 2-week interval
Result:	Strongly impaired the liver weight gain, protein and DNA synthesis as well as induction of cell cycle related proteins in the regenerating lobes after PBL.

REFERENCES

[1]. F J Cubero, et al. Hepatic proliferation in Gunn rats transplanted with hepatocytes: effect of retrorsine and tri-iodothyronine. Cell Prolif. 2005 Jun;38(3):137-46.

[2]. F J Cubero, et al. Hepatic proliferation in Gunn rats transplanted with hepatocytes: effect of retrorsine and tri-iodothyronine. Cell Prolif. 2005 Jun;38(3):137-46.

[3]. Yao Lu, et al. Establishment of a novel CYP3A4-transduced human hepatic sinusoidal endothelial cell model and its application in screening hepatotoxicity of pyrrolizidine alkaloids. J Environ Sci Health C Toxicol Carcinog. 2020;38(2):169-185.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA