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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

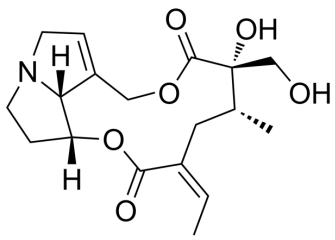
mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

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:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (284.58 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8458 mL	14.2292 mL	28.4584 mL
	5 mM	0.5692 mL	2.8458 mL	5.6917 mL
	10 mM	0.2846 mL	1.4229 mL	2.8458 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.11 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.11 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

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

In Vitro

Retrorsine (60-240 μM; 24 hours) significantly reduces HSEC-CYP3A4 cells viability and GSH levels, 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[4].

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

Animal Model:	Male Wistar rats (180±20 g), portal branch ligation (PBL) model[4]
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.

CUSTOMER VALIDATION

- Ecotoxicol Environ Saf. 2024 May 27:279:116515.

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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]. 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.

[3]. S Laconi, et al. Liver regeneration in response to partial hepatectomy in rats treated with retrorsine: a kinetic study. J Hepatol. 1999 Dec;31(6):1069-74.

[4]. Christian Picard, et al. Retrorsine: a kinetic study of its influence on rat liver regeneration in the portal branch ligation model. J Hepatol. 2003 Jul;39(1):99-105.

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