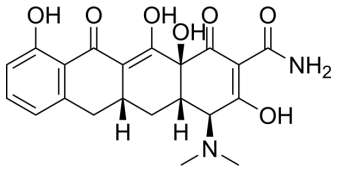
Sancycline

Cat. No.:	HY-17466
CAS No.:	808-26-4
Molecular Formula:	$C_{21}H_{22}N_2O_7$
Molecular Weight:	414.41
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 8.33 mg/mL (20.10 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4131 mL	12.0653 mL	24.1307 mL
	5 mM	0.4826 mL	2.4131 mL	4.8261 mL
	10 mM	0.2413 mL	1.2065 mL	2.4131 mL

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

BIOLOGICAL ACTIVITY

Description

Sancycline (6-Demethyl-6-deoxytetracycline) acts by reversibly binding to the 30 S ribosomal subunit and inhibiting protein translation by blocking entry of aminoacyl-tRNA into the ribosome a site similar to tetracycline (HY-A0107). Sancycline, four linearly fused six-membered rings with four stereocenters, is a rare semi-synthetic tetracycline (HY-A0107) prepared by hydrogenolysis of the chloro and benzylic hydroxy moieties of Declomycin[1][2][3].

IC_{50} & Target

Tetracycline

In Vitro

Sancycline (400 μM, 24 h) decreases 2 chloroethyl ethyl sulfide (CEES) and nitrogen mustard (NM) induced corneal injuries and inhibits Matrix metalloproteinase (MMP)-9 expression to some degree in the basement membrane zone (BMZ) increased by NM[2].

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

Immunofluorescence[2]

Cell Line:	Frozen corneal sections

Concentration:	400 μM
Incubation Time:	24 h
Result:	Inhibited MMP-9 expression to some degree in the NM-exposed corneas.

REFERENCES

[1]. Li G, et al. A brief overview of classical natural product drug synthesis and bioactivity[J]. Organic Chemistry Frontiers, 2022, 9(2): 517-571.

[2]. Gordon MK, et al. Doxycycline hydrogels as a potential therapy for ocular vesicant injury[J]. J Ocul Pharmacol Ther. 2010 Oct;26(5):407-19.

[3]. Nikita Shanmugam, et al. Abraham solvation parameter model: determination of experiment-based solute descriptor values for 3,5-dimethoxybenzoic acid based on measured solubility data[J]. Physics and Chemistry of Liquids. 2024. 62: 2: 89-100.

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