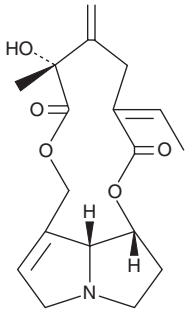
PRODUCT INFORMATION

Seneciphylline

Item No. 25146

CAS Registry No.:	480-81-9
Formal Name:	(3Z,6R,14aR,14bR)-3-ethylidene-3,4,5,6,9,11,13,14,14a,14b-decahydro-6-hydroxy-6-methyl-5-methylene-[1,6]dioxacyclododecino[2,3,4-gh]pyrrolizine-2,7-dione
Synonym:	NSC 30622
MF:	$C_{18}H_{23}NO_5$
FW:	333.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 212 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Seneciphylline is supplied as a crystalline solid. A stock solution may be made by dissolving the seneciphylline in the solvent of choice, which should be purged with an inert gas. Seneciphylline is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of seneciphylline in these solvents is approximately 1, 2, and 5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of seneciphylline can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of seneciphylline in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Seneciphylline is an alkaloid that has been found *F. japonicum* and has diverse biological activites.[1-4] It induces autophagy and decreases viability of Huh7.5 cells in a concentration-dependent manner.[1] Seneciphylline is also cytotoxic to HepG2 cells (IC_{20} = 0.66 mM).[2] Dietary administration of seneciphylline induces sex-linked recessive lethality in male *Drosophila*.[3] Seneciphylline (80 mg/kg) increases the activity of epoxide hydrase and glutathione-S-transferase and decreases activity of cytochrome P450 and aminopyrine demethylase in rat liver.[4]

References

1. Liu, W., Li, X., Zhou, B., *et al*. Differential induction of apoptosis and autophagy by pyrrolizidine alkaloid clivorine in human hepatoma Huh-7.5 cells and its toxic implication. *PLoS One* **12(6)**, e0179379 (2017).
2. Li, Y.H., Kan, W.L., Li, N., *et al*. Assessment of pyrrolizidine alkaloid-induced toxicity in an *in vitro* screening model. *J. Ethnopharmacol*. **150(2)**, 560-567 (2013).
3. Candrian, U., Lüthy, J., Graf, U., *et al*. Mutagenic activity of the pyrrolizidine alkaloids seneciphylline and senkirkine in *Drosophila* and their transfer into rat milk. *Food Chem. Toxicol*. **22(3)**, 223-225 (1984).
4. Kakrani, H.K. and Kalyani, G.A. Effect of seneciphylline and senecionine on hepatic drug metabolizing enzymes in rats. *J. Ethnaopharmacol*. **12(3)**, 271-278 (1984).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM