

PRODUCT INFORMATION



Syrosingopine

Item No. 36402

CAS Registry No.: 84-36-6

Formal Name: (3 β ,16 β ,17 α ,18 β ,20 α)-18-[[4-[(ethoxycarbonyloxy)-3,5-dimethoxybenzoyl]oxy]-11,17-dimethoxy-yohimban-16-carboxylic acid, methyl ester

Synonyms: NSC 77030, SU 3118

MF: C₃₅H₄₂N₂O₁₁

FW: 666.7

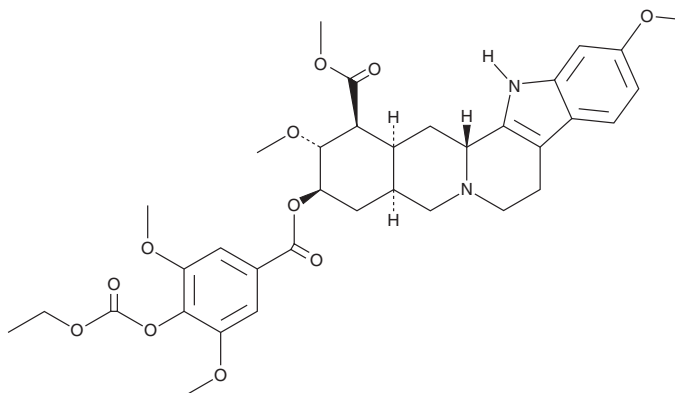
Purity: $\geq 95\%$

UV/Vis.: λ_{max} : 212 nm

Supplied as: A 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

Syrosingopine is supplied as a solid. A stock solution may be made by dissolving the syrosingopine in the solvent of choice, which should be purged with an inert gas. Syrosingopine is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of syrosingopine in DMF is approximately 2 mg/ml. Syrosingopine is slightly soluble in DMSO.

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 syrosingopine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of syrosingopine in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Syrosingopine is an inhibitor of monocarboxylate transporter 1 (MCT1) and MCT4 (IC₅₀s = 2,500 and 40 nM, respectively).¹ It inhibits MCT-facilitated lactate export and decreases intracellular pH in HL-60 promyeloblast cells when used at a concentration of 10 μ M. Syrosingopine (5 μ M), in combination with metformin (Item No. 13118), decreases cell growth in HL-60 cells.² Intravenous administration of syrosingopine (0.5 mg/kg) reduces heart norepinephrine levels, mean arterial pressure (MAP), and pulse rate in normotensive dogs.³ Formulations containing syrosingopine have been used in the treatment of hypertension.

References

1. Benjamin, D., Robay, D., Hindupur, S.K., *et al.* Dual inhibition of the lactate transporters MCT1 and MCT4 is synthetic lethal with metformin due to NAD⁺ depletion in cancer cells. *Cell Rep.* **25**(11), 3047-3058 (2018).
2. Benjamin, D., Colombi, M., Hindupur, S.K., *et al.* Syrosingopine sensitizes cancer cells to killing by metformin. *Sci. Adv.* **2**(12), e1601756 (2016).
3. Orlans, F.B., Finger, K.F., and Brodie, B.B. Pharmacological consequences of the selective release of peripheral norepinephrine by syrosingopine (Su 3118). *J. Pharmacol. Exp. Ther.* **128**, 131-139 (1960).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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