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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Syrosingopine

Cat. No.: HY-N4115

CAS No.: 84-36-6

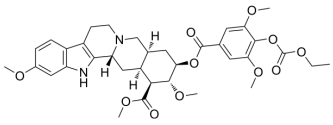
Molecular Formula: $C_{35}H_{42}N_2O_{11}$

Molecular Weight: 666.71

Target: Monocarboxylate Transporter

Pathway: Membrane Transporter/Ion Channel

Storage: 4°C, protect from light
* In solvent : -80°C, 2 years; -20°C, 1 year (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (93.74 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.4999 mL	7.4995 mL	14.9990 mL
5 mM	0.3000 mL	1.4999 mL	2.9998 mL
10 mM	0.1500 mL	0.7500 mL	1.4999 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: ≥ 2.08 mg/mL (3.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Syrosingopine (Su 3118) is an orally active lactate transporters (MCT1/MCT4) dual inhibitor, which can reduce glycolysis and induce synthetic lethality in cancer cells when combine with metformin. Syrosingopine shows anti-hypertensive activity by depleting peripheral stores of norepinephrine[1][2].

IC_{50} & Target	MCT1	MCT4

In Vitro

Syrosingopine (10 μM; 1, 3, 4 hours) causes accumulation of intracellular lactate after 1 hour and peaks at 4 hours, which lead to intracellular acidification in HeLa cells[1].
Syrosingopine (10 μM; 1, 2 hours) slows lactate efflux by inhibiting MCT4 and MCT1 in MCT1-KO and MCT4-KO HAP1 cells, respectively[1].
Syrosingopine (10-100 μM)-metformin combination induces synthetic lethality by inhibiting transport of lactate in HAP1

MCT1-KO cells[1].

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

Cell Viability Assay[1]

Cell Line:	HeLa, MCT1-KO, MCT4-KO HAP1, HAP1 MCT1-KO
Concentration:	10 μM
Incubation Time:	1, 2, 3, 4 hours
Result:	Caused intracellular lactate accumulation and acidification. Slowed lactate efflux by inhibiting MCT4 and MCT1. Induced synthetic lethality by inhibiting transport of lactate when combined with metformin.

In Vivo

Syrosingopine (5 mg/kg; s.c.; once) shows anti-hypertensive activity which as low as the result after ganglionic blockade by depleting peripheral stores of norepinephrine[2].

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

Animal Model:	Spontaneously hypertensive rats (SHR) (2 to 17-month-age)[2].
Dosage:	5 mg/kg
Administration:	Subcutaneous injection; once (16 hours before undertaking the study of blood pressure).
Result:	Showed anti-hypertensive activity by depleting peripheral stores of norepinephrine.

CUSTOMER VALIDATION

- Adv Sci (Weinh). 2022 Dec 7;e2204808.
- J Immunother Cancer. 2023 Jun;11(6):e006287.
- Int Immunopharmacol. 2024 Mar 5:130:111765.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Benjamin D, 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. 2018 Dec 11;25(11):3047-3058.e4.

[2]. Lefèvre-Borg F, et al. Role of the sympathetic nervous system in blood pressure maintenance and in the antihypertensive effects of calcium antagonists in spontaneously hypertensive rats. Hypertension. 1988 Apr;11(4):360-70.

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