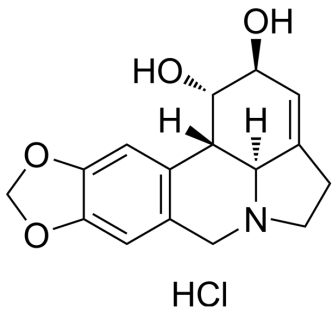
Lycorine hydrochloride

Cat. No.:	HY-N0289
CAS No.:	2188-68-3
Molecular Formula:	$C_{16}H_{18}ClNO_4$
Molecular Weight:	324
Target:	Autophagy; Bacterial; Virus Protease
Pathway:	Autophagy; Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (77.16 mM; Need ultrasonic)
H_2O : 16.67 mg/mL (51.45 mM; Need ultrasonic)

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	3.0864 mL	15.4321 mL	30.8642 mL
5 mM	0.6173 mL	3.0864 mL	6.1728 mL
10 mM	0.3086 mL	1.5432 mL	3.0864 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 (6.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lycorine hydrochloride is the main active ingredient of the herbal medicine derived from Lycoris radiata (L'Her.) Herb. and is also a melanoma vasculogenic inhibitor and has anti-tumor activity[1]. Lycorine hydrochloride effectively inhibits mitotic proliferation of Hey1B cells (IC_{50} of 1.2 μM)[2].

IC_{50} & Target

IC50: 1.2 μM (Hey1B cells)[2]

In Vitro

Lycorine hydrochloride (0-25 μM; 48 hours; C8161 cells) treatment markedly suppresses the expression of vascular endothelial (VE)-cadherin in a dose-dependent manner and also slightly diminishes the expression of Sema4D in C8161 cells.

However, the expression of the other six genes is not affected[1].
Lycorine hydrochloride (0-25 μM; 48 hours; C8161 cells) treatment markedly reduces VE-cadherin protein levels in C8161 cells in a dose-dependent fashion[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR[1]

Cell Line:	C8161 cells
Concentration:	0 μM, 1.56 μM, 3.13 μM, 6.25 μM, 12.5 μM, 25 μM
Incubation Time:	48 hours
Result:	Markedly suppressed the expression of VE-cadherin in a dose-dependent manner and also slightly diminished the expression of Sema4D in C8161 cells.

Western Blot Analysis[1]

Cell Line:	C8161 cells
Concentration:	0 μM, 1.56 μM, 3.13 μM, 6.25 μM, 12.5 μM, 25 μM
Incubation Time:	48 hours
Result:	Markedly reduced VE-cadherin protein levels in C8161 cells in a dose-dependent fashion.

In Vivo

Lycorine hydrochloride (0-15 μg; subcutaneous injection; for 14 days; BALB/C nude mice) treatment has an inhibitory effect on melanoma cell-mediated tumor vasculogenic mimicry[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6- to 8-week-old BALB/C nude mice[1]
Dosage:	0 μg, 7.5 μg, 15 μg
Administration:	Subcutaneous injection; for 14 days
Result:	Showed an inhibitory effect on melanoma cell-mediated tumor vasculogenic mimicry.

CUSTOMER VALIDATION

- J Exp Clin Cancer Res. 2022 Mar 30;41(1):116.
- Pharmacol Res. 2021 Dec 1;175:105985.
- Int J Mol Med. 2022 Dec;50(6):145.
- Eur J Pharmacol. 2023 Nov 10:961:176162.
- Microorganisms. 2022, 10(10), 2089.

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REFERENCES

[1]. Liu, R. et al. Lycorine hydrochloride inhibits metastatic melanoma cell-dominant vasculogenic mimicry. Pigment cell & melanoma research 25, 630-638, doi:10.1111/j.1755-148X.2012.01036.x (2012).

[2]. Cao, Z. et al.Lycorine hydrochloride selectively inhibits human ovarian cancer cell proliferation and tumor neovascularization with very low toxicity. Toxicology letters 218, 174-185, doi:10.1016/j.toxlet.2013.01.018 (2013).

Caution: Product has not been fully validated for medical applications. For research use only.

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