Laninamivir octanoate

Cat. No.: HY-14818A

CAS No.: 203120-46-1

Molecular Formula: $C_{21}H_{36}N_4O_8$

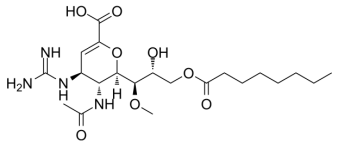
Molecular Weight: 472.53

Target: Influenza Virus

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (211.63 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1163 mL	10.5813 mL	21.1627 mL
5 mM	0.4233 mL	2.1163 mL	4.2325 mL
10 mM	0.2116 mL	1.0581 mL	2.1163 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.29 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.29 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Laninamivir octanoate (CS-8958), a proagent of Laninamivir, is a long-acting neuraminidase (NA) inhibitor with anti-influenza virus activity. Laninamivir octanoate shows anti-influenza activity against Oseltamivir-resistant viruses, and also against the pandemic influenza viruses[1][2].

In Vitro

Laninamivir octanoate (CS-8958) shows inhibitory activity with an IC_{50} of 631-1170 nM, 39.2-221 nM and 128 nM to the H1N1 viruses strains, H3N2 viruses strains and H2N2 (A/Singapore/1/57) virus, respectively[1].

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

In Vivo

Laninamivir octanoate (CS-8958; 95 μg/kg; intranasal administration; three dose; at 4 h before and 4 h and 17 h postinfection) treatment shows significantly life-prolonging effect in infected model[1].

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

Animal Model:	Female BALB/c mice (5-6 weeks old) infected with influenza A virus A/PR/8/34[1]
Dosage:	0.2 μmol/kg (95 μg/kg)
Administration:	Intranasal administration; three dose; at 4 h before and 4 h and 17 h postinfection
Result:	Showed life-prolonging effect in infected model.

REFERENCES

[1]. Makoto Yamashita, et al. CS-8958, a prodrug of the new neuraminidase inhibitor R-125489, shows long-acting anti-influenza virus activity. Antimicrob Agents Chemother. 2009 Jan;53(1):186-92.

[2]. Hideyuki Ikematsu, et al. Laninamivir octanoate: a new long-acting neuraminidase inhibitor for the treatment of influenza. Expert Rev Anti Infect Ther. 2011 Oct;9(10):851-7.

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