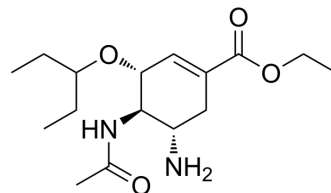


## Oseltamivir

Cat. No.:	HY-13317
CAS No.:	196618-13-0
Molecular Formula:	C <sub>16</sub> H <sub>28</sub> N <sub>2</sub> O <sub>4</sub>
Molecular Weight:	312.4
Target:	Influenza Virus
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (320.10 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	3.2010 mL	16.0051 mL	32.0102 mL
		5 mM	0.6402 mL	3.2010 mL	6.4020 mL
	10 mM	0.3201 mL	1.6005 mL	3.2010 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: ≥ 2.5 mg/mL (8.00 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.00 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.00 mM); Clear solution				

### BIOLOGICAL ACTIVITY

Description	Oseltamivir (GS 4104) is an orally active influenza virus neuraminidase inhibitor (NAI). Oseltamivir inhibits influenza A/H3N2, A/H1N2, A/H1N1, and B viruses with mean IC <sub>50</sub> s of 0.67, 0.9, 1.34 and 13 nM, respectively <sup>[1]</sup> .
In Vivo	Oseltamivir (20 mg/kg/day, p.o., twice daily for 10 days) prevented death in the H1N1pdm virus infection in mice <sup>[2]</sup> . Oseltamivir (10 mg/kg/day, oral gavage, 5 days) together with Amantadine (HY-B0402) (15 or 30 mg/kg) has greater protection efficiency against H5N1 influenza virus infection in mice than monotherapy <sup>[3]</sup> . Oseltamivir is also used together with Ribavirin (HY-B0434), or Favipiravir (HY-14768), or Peramivir (HY-17015A) to prevent influenza virus infection in mice <sup>[4][5]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2021 Apr 24;6(1):165.
- J Med Virol. 2023 Jul;95(7):e28968.
- Chemosphere. 2015 Jul;131:41-7.
- Cell Prolif. 2021 Jan;54(1):e12953.
- Antiviral Res. 2020 Apr;176:104751.

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## REFERENCES

- [1]. Smee DF, et al. Activities of JNJ63623872 and oseltamivir against influenza A H1N1pdm and H3N2 virus infections in mice. Antiviral Res. 2016 Dec;136:45-50.
- [2]. Ilyushina NA, et al. Amantadine-oseltamivir combination therapy for H5N1 influenza virus infection in mice. Antivir Ther. 2007;12(3):363-70.
- [3]. Ilyushina NA, et al. Oseltamivir-ribavirin combination therapy for highly pathogenic H5N1 influenza virus infection in mice. Antimicrob Agents Chemother. 2008 Nov;52(11):3889-97.
- [4]. Smee DF, et al. Combinations of oseltamivir and peramivir for the treatment of influenza A (H1N1) virus infections in cell culture and in mice. Antiviral Res. 2010 Oct;88(1):38-44.
- [5]. O Ferraris, et al. Sensitivity of Influenza Viruses to Zanamivir and Oseltamivir: A Study Performed on Viruses Circulating in France Prior to the Introduction of Neuraminidase Inhibitors in Clinical Practice. Antiviral Res. 2005 Oct;68(1):43-8.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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