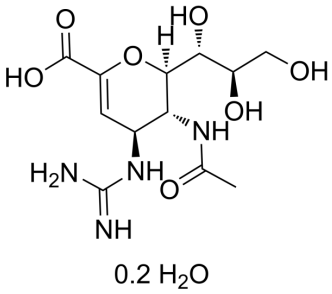
Zanamivir (hydrate)(5:1)

Cat. No.:	HY-13210A
CAS No.:	171094-50-1
Molecular Formula:	$C_{12}H_{20.4}N_4O_{7.2}$
Molecular Weight:	335.91
Target:	Antibiotic; Influenza Virus
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Zanamivir hydrate (5:1) is the hydrate of Zanamivir. Zanamivir is an influenza viral neuraminidase inhibitor with IC_{50} values of 0.95 nM and 2.7 nM for influenza A and B, respectively[1].
IC_{50} & Target	IC_{50}: 0.95 nM (Influenza A); 2.7 nM (Influenza B)[1]
In Vivo	Zanamivir has a poor bioavailability in oral administration, with only 4-17% of the agent. Oral delivery of Zanamivir has been a problem due to its strong hydrophilic nature that limits its transport across the intestinal epithelium. Permeation enhancers such as sodium cholate, hydroxypropyl β-cyclodextrin could be used with zanamivir to enhance the intestinal permeability[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2021 Apr 24;6(1):165.
- Antimicrob Agents Chemother. 2020 Jun 23;64(7):e00222-20.
- PLoS One. 2018 Jul 12;13(7):e0200761.
- bioRxiv. 2020 Mar.
- bioRxiv. July 26, 2018.

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REFERENCES

[1]. Gubareva LV, et al. Comparison of the activities of zanamivir, oseltamivir, and RWJ-270201 against clinical isolates ofinfluenza virus and neuraminidase inhibitor-resistant variants. Antimicrob Agents Chemother. 2001 Dec;45(12):3403-8.

[2]. McKimm-Breschkin JL, et al. Management of influenza virus infections with neuraminidase inhibitors: detection, incidence, and implications of drug resistance. Treat Respir Med. 2005;4(2):107-16.

[3]. Shanmugam S, et al. Zanamivir oral delivery: enhanced plasma and lung bioavailability in rats. Biomol Ther (Seoul). 2013 Mar;21(2):161-9.

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