

# PRODUCT INFORMATION



## Zanamivir

Item No. 15123

**CAS Registry No.:** 139110-80-8  
**Formal Name:** 5-(acetilamino)-4-  
[(aminoiminomethyl)amino]-2,6-  
anhydro-3,4,5-trideoxy-D-glycero-  
D-galacto-non-2-enonic acid

**Synonyms:** GG 167, GR 121167X

**MF:** C<sub>12</sub>H<sub>20</sub>N<sub>4</sub>O<sub>7</sub>

**FW:** 332.3

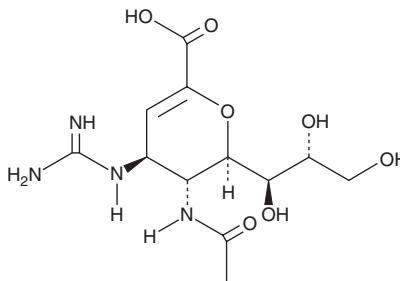
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 231 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Zanamivir is supplied as a crystalline solid. A stock solution may be made by dissolving the zanamivir in the solvent of choice, which should be purged with an inert gas. Zanamivir is soluble in the organic solvent DMSO at a concentration of approximately 0.13 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of zanamivir can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of zanamivir in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Zanamivir is an inhibitor of influenza neuraminidase.<sup>1</sup> It inhibits neuraminidase activity in clinical isolates of influenza A subtypes H1N1 and H3N2 and influenza B (geometric mean IC<sub>50</sub>s = 0.73, 1.64, and 11.21 nM, respectively). Zanamivir inhibits replication of influenza A and B in isolated human respiratory epithelial cells (EC<sub>90</sub>s = <0.01 mg/L and 0.25-0.54 mg/L, respectively).<sup>2</sup> It reduces lung viral titers in mice infected with influenza A or B when administered intranasally at a dose of 0.4 mg/kg. Formulations containing zanamivir have been used in the prevention and treatment of influenza infection.

### References

- Ikematsu, H., Kawai, N., Iwaki, N., *et al.* In vitro neuraminidase inhibitory activity of four neuraminidase inhibitors against clinical isolates of influenza virus in the Japanese 2012-2013 season. *J. Infect. Chemother.* **21(9)**, 634-638 (2015).
- Waghorn, S.L. and Goa, K.L. Zanamivir. *Drugs* **55(5)**, 721-725 (1998).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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