

## 2'-Deoxy-2'-fluorocytidine

## Chemical Properties

CAS No. :	10212-20-1
Formula:	C <sub>9</sub> H <sub>12</sub> FN <sub>3</sub> O <sub>4</sub>
Molecular Weight:	245.208
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

## Biological Description

Description	<p>2'-Deoxy-2'-fluorocytidine, a nucleoside analog, is a potent inhibitor of Crimean-Congo hemorrhagic fever virus (CCHFV) replication and can act synergistically with T705 to enhance the antiviral effects on CCHFV replication[1]. It exhibits antiviral activity with EC<sub>50</sub> values of 61 nM and 31 nM against CCHFV and CCHFV/ZsG in Huh7 cells, respectively, and has a CC<sub>50</sub> of &gt;50.0 μM in Huh7 cells[1].</p> <p>[1]. Stephen R Welch, et al. Identification of 2'-deoxy-2'-fluorocytidine as a potent inhibitor of Crimean-Congo hemorrhagic fever virus replication using a recombinant fluorescent reporter virus. Antiviral Res. 2017 Nov; 147:91-99.</p>
Targets(IC <sub>50</sub> )	Nucleoside Antimetabolite/Analog, Influenza Virus
In vitro	2'-Deoxy-2'-fluorocytidine exhibits antiviral activity with 50% effective concentrations (EC <sub>50</sub> ) of 61 nM against CCHFV and 31 nM against CCHFV/ZsG in Huh7 cells and shows a 50% cytotoxicity concentration (CC <sub>50</sub> ) of >50.0 μM in Huh7 cells[1].

## Solubility Information

Solubility	DMSO: 50.00 mg/mL (203.91 mM), Sonication is recommended. H <sub>2</sub> O: 5.00 mg/mL (20.39 mM), Sonication and heating to 60°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	4.0781 mL	20.3907 mL	40.7814 mL
5 mM	0.8156 mL	4.0781 mL	8.1563 mL
10 mM	0.4078 mL	2.0391 mL	4.0781 mL
50 mM	0.0816 mL	0.4078 mL	0.8156 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Stephen R Welch, et al. Identification of 2'-deoxy-2'-fluorocytidine as a potent inhibitor of Crimean-Congo hemorrhagic fever virus replication using a recombinant fluorescent reporter virus. *Antiviral Res.* 2017 Nov;147:91-99.

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