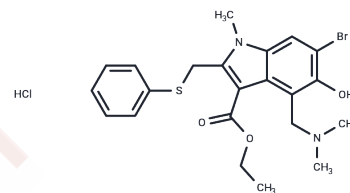


## Umifenovir hydrochloride

## Chemical Properties

CAS No. :	131707-23-8
Formula:	C <sub>22</sub> H <sub>25</sub> BrN <sub>2</sub> O <sub>3</sub> ·HCl
Molecular Weight:	513.88
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	Umifenovir hydrochloride (Arbidol HCl) , an broad-spectrum antiviral chemical agent, can inhibit cell invade of enveloped viruses by blocking viral fusion with host cell membrane.
Targets(IC50)	Influenza Virus,SARS-CoV
In vitro	Arbidol inhibits the cell entry of HCV pseudoparticles of genotypes 1a, 1b, and 2a in a dose-dependent fashion. Arbidol also displays a dose-dependent inhibition of HCV membrane fusion, as assayed by using HCV pseudoparticles (HCVpp) and fluorescent liposomes. [1] Arbidol is found to present potent inhibitory activity against enveloped and non-enveloped RNA viruses, including FLU-A, RSV, HRV 14 and CVB3 when added before, during, or after viral infection, with IC50 ranging from 2.7 to 13.8 mg/mL. Arbidol shows selective antiviral activity against AdV-7, a DNA virus, only when added after infection (therapeutic index (TI) = 5.5). [2] Arbidol induces changes to viral mRNA synthesis of the PB2, PA, NP, NA, and NS genes in MDCK cultures infected with influenza A/PR/8/34. [3] Arbidol interacts and modifies the physicochemical properties of the phospholipids in the membrane, having a significant effect on negatively charged phospholipids but a minor one on zwitterionic phospholipids. Arbidol is located at the interface of the membrane, participates in hydrogen bonding either with water or the phospholipid or both, and decreases the hydrogen bonding network of the phospholipids giving place to a phospholipid phase similar to the dehydrated solid one. [4] Arbidol is found to have potent inhibitory activity against HTNV when added in vitro before or after viral infection, with IC50 of 0.9 mg/mL and 1.2 mg/mL, respectively. [5]

## Solubility Information

Solubility	Ethanol: 21 mg/mL (40.87 mM),Sonication is recommended. DMSO: 250 mg/mL (486.49 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (19.46 mM),Suspension. 10% DMSO+90% Saline: < 10 mg/mL (19.46 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and</i>

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In vivo Formulation	<i>used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.946 mL	9.7299 mL	19.4598 mL
5 mM	0.3892 mL	1.946 mL	3.892 mL
10 mM	0.1946 mL	0.973 mL	1.946 mL
50 mM	0.0389 mL	0.1946 mL	0.3892 mL

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

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