Arbidol HCl

Catalog No.C08298 Batch:C0829803

Product Datasheet

Technical Data

Formula	$C_{22}H_{25}BrN_2O_3S.HCl$					
Molecular Weight	513.88	**CAS No.**	131707-23-8			
Solubility (25°C)*	In vitro	DMSO	100 mg/mL (194.59 mM)			
		Ethanol	50 mg/mL (97.29 mM)			
		Water	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.
		Injection	Clear solution	5%DMSO [1]→ 40%PEG300 [2]→ 5%Tween80 [3]→ 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	5mg/ml (9.73mM)	Taking the 1 mL working solution as an example, add 50 μL of 100 mg/ml clarified DMSO stock solution to 400 μL of PEG300, mix evenly to clarify it; add 50 μL of Tween80 to the above system, mix evenly to clarify; then continue to add 500 μL of ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.
			Clear solution	5% DMSO [1]→ 95% Corn oil Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	0.71mg/ml (1.38mM)	Taking the 1 mL working solution as an example, add 50 μL of 14.2 mg/ml clear DMSO stock solution to 950 μL of corn oil and mix evenly. The mixed solution should be used immediately for optimal results.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.9460 mL	9.7299 mL	19.4598 mL
5 mM	0.3892 mL	1.9460 mL	3.8920 mL
10 mM	0.1946 mL	0.9730 mL	1.9460 mL
50 mM	0.0389 mL	0.1946 mL	0.3892 mL

Biological Activity

Description	Arbidol HCl (Umifenovir) is a broad-spectrum antiviral compound that blocks viral fusion, used in treatment of influenza and other respiratory viral infections.
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]

References

https://pubmed.ncbi.nlm.nih.gov/17455911/ https://pubmed.ncbi.nlm.nih.gov/17497238/ https://pubmed.ncbi.nlm.nih.gov/22028179/

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RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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