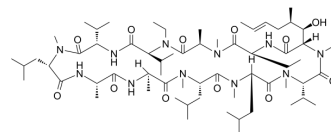


## Alisporivir

<b>Cat. No.:</b>	HY-12559
<b>CAS No.:</b>	254435-95-5
<b>Molecular Formula:</b>	C <sub>63</sub> H <sub>113</sub> N <sub>11</sub> O <sub>12</sub>
<b>Molecular Weight:</b>	1216.64
<b>Target:</b>	HCV
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	Stored under nitrogen, away from moisture Powder    -80°C    2 years -20°C    1 year * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 50 mg/mL (41.10 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	0.8219 mL	4.1097 mL	8.2194 mL
		5 mM	0.1644 mL	0.8219 mL	1.6439 mL
		10 mM	0.0822 mL	0.4110 mL	0.8219 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline Solubility: ≥ 2.62 mg/mL (2.15 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (2.05 mM); Clear solution				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Alisporivir (Debio-025) is a cyclophilin inhibitor molecule with potent anti-hepatitis C virus (HCV) activity.
<b>In Vitro</b>	DEB025 binds to CypA, a peptidyl-prolyl cis-trans isomerase which is a crucial cofactor for HCV replication <sup>[1]</sup> . Alisporivir (Debio-025) represents the prototype of a new class of non-immunosuppressive cyclophilin inhibitors. Alisporivir prevents HCV protein-mediated collapse of the respiration-driven mitochondrial membrane potential. Alisporivir prevents HCV protein-mediated mitochondrial dysfunction outside the context of apoptosis, calcium overload, production of ROS, dysfunction <sup>[2]</sup> . In cell culture models, low-micromolar doses of alisporivir block SARS-CoV and MERS-CoV replication. Combination treatment with Alisporivir and ICN-1229 increases the anti-MERS-CoV activity in cell culture <sup>[3]</sup> . Alisporivir pretreatment stimulates antigen presentation by hepatoma target cells, leading to enhancement of antigen-specific CD8+ T

	cell activation by 40%. Alisporivir induces an increase of MHC-I and beta-2 microglobulin on the surface of several cell lines [4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Combination treatment with Alisporivir and ICN-1229 does not protect against SARS-CoV infection in a mouse model <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

### Cell Assay <sup>[2]</sup>

Alisporivir is prepared in DMSO at 4 mM and diluted in cell culture medium at the indicated concentrations (0.1, 0.2, 0.3, 0.4, 0.5 μM). UHCV-32 and UHCVcon-57.3 are U-2 OS human osteosarcoma-derived cell lines inducibly expressing the entire open reading frame derived from the HCV H77 prototype and consensus clones, respectively. Cell viability is measured by trypan blue exclusion analysis<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- J Exp Med. 2021 Apr 5;218(4):e20202207.
- Cell Death Differ. 2022 Jun 20.
- Cell Rep. 2021 Apr 6;35(1):108959.
- iScience. 2022: 105626.
- Antimicrob Agents Chemother. 2022 Nov 14;e0039222.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Coelmont L, et al. DEB025 (Alisporivir) inhibits hepatitis C virus replication by preventing a cyclophilin A induced cis-trans isomerisation in domain II of NS5A. PLoS One. 2010 Oct 27;5(10):e13687.

[2]. Quarato G, et al. The cyclophilin inhibitor alisporivir prevents hepatitis C virus-mediated mitochondrial dysfunction. Hepatology. 2012 May;55(5):1333-43.

[3]. de Wilde AH, et al. Alisporivir inhibits MERS- and SARS-coronavirus replication in cell culture, but not SARS-coronavirus infection in a mouse model. Virus Res. 2017 Jan 15;228:7-13.

[4]. Esser-Nobis K, et al. The cyclophilin-inhibitor alisporivir stimulates antigen presentation thereby promoting antigen-specific CD8(+) T cell activation. J Hepatol. 2016 Jun;64(6):1305-14.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA