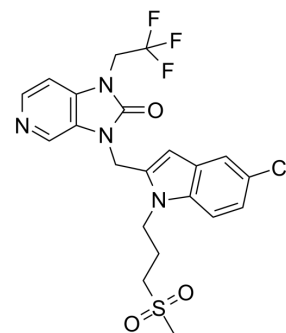


Rilematovir

Cat. No.:	HY-112180		
CAS No.:	1383450-81-4		
Molecular Formula:	C ₂₁ H ₂₀ ClF ₃ N ₄ O ₃ S		
Molecular Weight:	500.92		
Target:	RSV		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 65 mg/mL (129.76 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		1.9963 mL	9.9816 mL	19.9633 mL
		5 mM		0.3993 mL	1.9963 mL	3.9927 mL
10 mM			0.1996 mL	0.9982 mL	1.9963 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.17 mg/mL (4.33 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.17 mg/mL (4.33 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.17 mg/mL (4.33 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Rilematovir (JNJ-678) is a novel fusion protein inhibitor. Rilematovir has the potential for respiratory syncytial virus (RSV) research.
IC₅₀ & Target	Fusion protein ^[1]
In Vitro	Rilematovir is a small-molecule respiratory syncytial virus (RSV) fusion inhibitor currently under clinical evaluation in infants hospitalized for RSV infection. Rilematovir binds to RSV F protein in its prefusion conformation. Rilematovir displays very

potent antiviral activity and low cytotoxicity. In addition to its activity against the RSV A2 strain, Rilematovir is also highly active against a number of RSV strains from both A and B subtypes. The EC₅₀ in an RSV infection assay using HeLa cells is 460 pM^[1].

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

In Vivo

Oral treatment of neonatal lambs with Rilematovir, or with an equally active close analog, efficiently inhibits established acute lower respiratory tract infection in the animals, even when treatment is delayed until external signs of respiratory syncytial virus illness have become visible^[1].

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

PROTOCOL

Cell Assay ^[1]

The antiviral activity of JNJ-678 (JNJ-53718678) against hMPV is evaluated using a cellular infectious assay in 96-well plates in which Vero/TMPRSS2 cells are infected with recombinant hMPV65. Cells are treated with different concentrations of JNJ-678 (JNJ-53718678) and then infected with recombinant hMPV (1×10⁴ PFU per well). Three days post-virus exposure, viral replication is quantified by measuring fluorescence and the EC₅₀ is calculated^[1].

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

Animal Administration ^[1]

Rats^[1]

Cotton rats receive either a single dose at 24 h after viral infection or once-daily doses of 40 mg/kg JNJ-678 (JNJ-53718678) by oral gavage, at 24, 48, and 72 h after viral infection. The decrease of viral replication in all experiments is compared to challenged animals that received only the vehicle^[1].

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

CUSTOMER VALIDATION

- ACS Nano. 2021 Jul 22.
- J Virol. 2021 Aug 11;JVI0120521.
- bioRxiv. 2023 Sep 21.

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REFERENCES

[1]. Roymans D, et al. Therapeutic efficacy of a respiratory syncytial virus fusion inhibitor. Nat Commun. 2017 Aug 1;8(1):167.

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

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