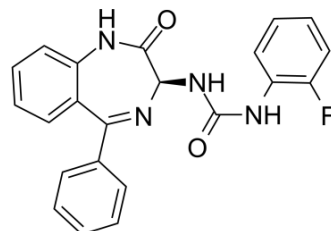


RSV604

Cat. No.:	HY-12993		
CAS No.:	676128-63-5		
Molecular Formula:	C ₂₂ H ₁₇ FN ₄ O ₂		
Molecular Weight:	388.39		
Target:	RSV		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (257.47 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.5747 mL	12.8737 mL	25.7473 mL
	5 mM	0.5149 mL	2.5747 mL	5.1495 mL
	10 mM	0.2575 mL	1.2874 mL	2.5747 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (6.44 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.44 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RSV604 is a novel inhibitor of respiratory syncytial virus replication (EC₅₀=0.86 μM); a putative RSV nucleoprotein(N) inhibitor in phase 2 clinical trials. IC₅₀ value: 0.86 μM (EC₅₀) [1] Target: RSV inhibitor RSV604, a novel benzodiazepine with submicromolar anti-RSV activity. It proved to be equipotent against all clinical isolates tested of both the A and B subtypes of the virus. The compound has a low rate of in vitro resistance development. Sequencing revealed that the resistant virus had mutations within the nucleocapsid protein. This is a novel mechanism of action for anti-RSV compounds. In a three-dimensional human airway epithelial cell model, RSV604 was able to pass from the basolateral side of the epithelium effectively to inhibit virus replication after mucosal inoculation. RSV604, which is currently in phase II clinical trials,

represents the first in a new class of RSV inhibitors and may have significant potential for the effective treatment of RSV disease.

CUSTOMER VALIDATION

- J Org Chem. 2020 Mar 20;85(6):4267-4278.

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REFERENCES

- [1]. Henderson EA, et al. 1,4-benzodiazepines as inhibitors of respiratory syncytial virus. The identification of a clinical candidate. J Med Chem. 2007 Apr 5;50(7):1685-92.
 - [2]. Chapman J, et al. RSV604, a novel inhibitor of respiratory syncytial virus replication. Antimicrob Agents Chemother. 2007 Sep;51(9):3346-53.
 - [3]. Challa S, et al. Mechanism of action for respiratory syncytial virus inhibitor RSV604. Antimicrob Agents Chemother. 2015 Feb;59(2):1080-7.
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Caution: Product has not been fully validated for medical applications. For research use only.

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