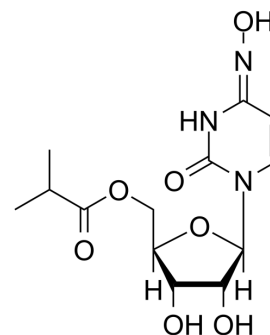


## Molnupiravir

<b>Cat. No.:</b>	HY-135853		
<b>CAS No.:</b>	2492423-29-5		
<b>Molecular Formula:</b>	C <sub>13</sub> H <sub>19</sub> N <sub>3</sub> O <sub>7</sub>		
<b>Molecular Weight:</b>	329.31		
<b>Target:</b>	SARS-CoV; Influenza Virus		
<b>Pathway:</b>	Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 50 mg/mL (151.83 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.0367 mL	15.1833 mL	30.3665 mL
	5 mM	0.6073 mL	3.0367 mL	6.0733 mL
	10 mM	0.3037 mL	1.5183 mL	3.0367 mL

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

#### In Vivo

- Add each solvent one by one: 10% PEG400 >> 2.5% Ethoxylated hydrogenated castor oil >> 87.5% water  
Solubility: 12.05 mg/mL (36.59 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (7.59 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (7.59 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (7.59 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Molnupiravir (EIDD-2801) is an orally bioavailable prodrug of the ribonucleoside analog EIDD-1931. Molnupiravir has broad spectrum antiviral activity against influenza virus and multiple coronaviruses, such as SARS-CoV-2, MERS-CoV, SARS-CoV. Molnupiravir has the potential for the research of COVID-19, and seasonal and pandemic influenza<sup>[1][2]</sup>.

#### In Vivo

Molnupiravir (50-500 mg/kg; p.o.; every 12 hours for 3 days) is robustly antiviral and able to prevent SARS-CoV replication

and disease<sup>[1]</sup>.

Molnupiravir (7 mg/kg; p.o.; twice daily for 3.5 days) significantly reduces shed virus load and duration of fever<sup>[2]</sup>.

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

Animal Model:	C57BL/6 mice (intranasal infection with SARS-CoV) <sup>[1]</sup>
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Dosage:	50, 150, 500 mg/kg
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Administration:	Oral; every 12 hours for 3 days
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Result:	Body weight loss is significantly diminished or prevented.
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Animal Model:	Ca/09-infected female ferrets <sup>[1]</sup>
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Dosage:	7 mg/kg
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Administration:	Oral; twice daily for 3.5 days
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Result:	Shed virus load and duration of fever were significantly reduced.
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## CUSTOMER VALIDATION

- Nature. 2022 Apr;604(7904):134-140.
- Nat Microbiol. 2022 Jun 15.
- Nat Commun. 2021 Nov 5;12(1):6415.
- Nucleic Acids Res. 2021 Jan 8;49(D1):D1113-D1121.
- PLoS Pathog. 2021 Sep 17;17(9):e1009929.

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

## REFERENCES

[1]. Toots M, et al. Characterization of orally efficacious influenza drug with high resistance barrier in ferrets and human airway epithelia. Sci Transl Med. 2019 Oct 23;11(515). pii: eaax5866.

[2]. Sheahan TP, et al. An orally bioavailable broad-spectrum antiviral inhibits SARS-CoV-2 in human airway epithelial cell cultures and multiple coronaviruses in mice. Sci Transl Med. 2020 Apr 6. pii: eabb5883.

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

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