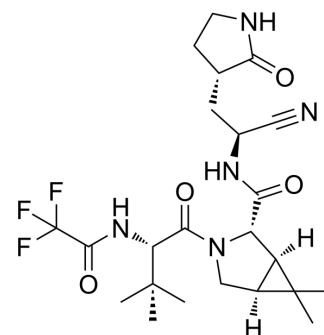


Nirmatrelvir

Cat. No.:	HY-138687
CAS No.:	2628280-40-8
Molecular Formula:	C ₂₃ H ₃₂ F ₃ N ₅ O ₄
Molecular Weight:	499.53
Target:	SARS-CoV
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 140 mg/mL (280.26 mM; Need ultrasonic)					
	Ethanol : 50 mg/mL (100.09 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div> <div>Mass</div>	1 mg	5 mg	10 mg	
			1 mM	2.0019 mL	10.0094 mL	20.0188 mL
			5 mM	0.4004 mL	2.0019 mL	4.0038 mL
10 mM			0.2002 mL	1.0009 mL	2.0019 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.16 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.16 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.16 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Nirmatrelvir (PF-07321332) is a potent and orally active SARS-CoV 3C-like protease (3CL ^{PRO}) inhibitor. Nirmatrelvir (PF-07321332) targets to the SARS-CoV-2 virus and can be used for COVID-19 research ^[1] .
IC ₅₀ & Target	IC ₅₀ : 3CL ^{PRO} [1]
In Vitro	3CL ^{PRO} is responsible for cleaving polyproteins 1a and 1ab of SARS-CoV-2.1. Without the activity of the SARS-CoV-2 3CL ^{PRO} , nonstructural proteins (including proteases) cannot be released to perform their functions, inhibiting viral replication ^[1] .

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

CUSTOMER VALIDATION

- N Engl J Med. 2023 Jan 5;388(1):89-91.
- Signal Transduct Target Ther. 2025 Jan 17;10(1):30.
- Nature. 2022 Jul;607(7917):119-127.
- Sci Immunol. 2023 Apr 14;8(82):eadf0348.
- Nat Commun. 2025 Apr 3;16(1):2900.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. KoenVandyck, et al. Considerations for the Discovery and Development of 3-Chymotrypsin-Like Cysteine Protease Inhibitors Targeting SARS-CoV-2 Infection. Current Opinion in Virology Available online 27 April 2021

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

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