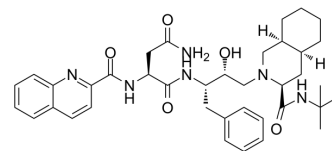


## Saquinavir

<b>Cat. No.:</b>	HY-17007		
<b>CAS No.:</b>	127779-20-8		
<b>Molecular Formula:</b>	C <sub>38</sub> H <sub>50</sub> N <sub>6</sub> O <sub>5</sub>		
<b>Molecular Weight:</b>	670.84		
<b>Target:</b>	HIV; HIV Protease; SARS-CoV		
<b>Pathway:</b>	Anti-infection; Metabolic Enzyme/Protease		
<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 : 100 mg/mL (149.07 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.4907 mL	7.4533 mL	14.9067 mL
	5 mM	0.2981 mL	1.4907 mL	2.9813 mL
	10 mM	0.1491 mL	0.7453 mL	1.4907 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 (3.73 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (3.73 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (3.73 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Saquinavir(Ro 31-8959) is an HIV Protease inhibitor used in antiretroviral therapy. Saquinavir is also a SARS-CoV 3CL<sup>PRO</sup> inhibitor with an IC<sub>50</sub> of 1.36 μM.

#### In Vitro

Saquinavir is a protease inhibitor. Proteases are enzymes that cleave protein molecules into smaller fragments. HIV protease is vital for both viral replication within the cell and release of mature viral particles from an infected cell. Saquinavir binds to the active site of the viral protease and prevents cleavage of viral polyproteins, preventing maturation of the virus. Saquinavir inhibits both HIV-1 and HIV-2 proteases. Studies have also looked at Saquinavir as a possible anti-

cancer agent.

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

## CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2021 May 29;6(1):212.
- Nat Commun. 2020 Sep 4;11(1):4417.
- J Med Chem. 2021 Feb 23.
- Antimicrob Agents Chemother. 2020 Aug 20;64(9):e00872-20.
- Int J Antimicrob Agents. 2019 Dec;54(6):814-819.

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

## REFERENCES

- [1]. Marco Donia, Danijela Maksimovic-Ivanic, Sanja Mijatovic, et al. In vitro and in vivo anticancer action of Saquinavir-NO, a novel nitric oxide-derivative of the protease inhibitor saquinavir, on hormone resistant prostate cancer cells. Cell cycle. 2011, 10(3): 492 - 499.
- [2]. Walmsley Sharon, Avihingsanon Anchalee, Slim Jihad et al. Gemini: A Noninferiority Study of Saquinavir/Ritonavir Versus Lopinavir/Ritonavir as Initial HIV-1 Therapy in Adults. JAIDS Journal of Acquired Immune Deficiency Syndromes. 2009,50 (4) :367-374.
- [3]. Saquinavir
- [4]. Barillari Giovanna, Iovane Andréa, Bacigalupo Ilariaa, et al. Ritonavir or saquinavir impairs the invasion of cervical intraepithelial neoplasia cells via a reduction of MMP expression and activity. AIDS. 2012, 26 (8): 909-919.
- [5]. Martha Stefanidou, Carolina Herrera, Naomi Armanasco et al. Saquinavir Inhibits Early Events Associated with Establishment of HIV-1 Infection: Potential Role for Protease Inhibitors in Prevention. Antimicrob. Agents Chemother. 2012, 56 (8): 4381-4390.
- [6]. Qi Sun, et al. Bardoxolone and bardoxolone methyl, two Nrf2 activators in clinical trials, inhibit SARS-CoV-2 replication and its 3C-like protease. Signal Transduct Target Ther. 2021 May 29;6(1):212.

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

**India Contact:**

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444

Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)