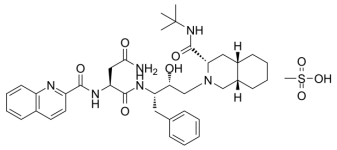
Saquinavir mesylate

Cat. No.:	HY-17003
CAS No.:	149845-06-7
Molecular Formula:	$C_{39}H_{54}N_6O_8S$
Molecular Weight:	766.95
Target:	HIV; HIV Protease; Autophagy
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Autophagy
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 16.67 mg/mL (21.74 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3039 mL	6.5193 mL	13.0387 mL
	5 mM	0.2608 mL	1.3039 mL	2.6077 mL
	10 mM	0.1304 mL	0.6519 mL	1.3039 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 mg/mL (2.61 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2 mg/mL (2.61 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2 mg/mL (2.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Saquinavir mesylate is an HIV Protease Inhibitor used in antiretroviral therapy. IC50 Value:Target: HIV ProteaseSaquinavir 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.

IC_{50} & Target	HIV-1	HIV-2

CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2021 May 29;6(1):212.
- Nat Commun. 2020 Sep 4;11(1):4417.
- Int J Antimicrob Agents. 2019 Dec;54(6):814-819.
- Phytomedicine. 2019 Mar 15;56:175-182.
- Antiviral Res. 2022 Nov 10;105463.

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REFERENCES

[1]. Kaldor et al (1995) Isophthalic acid derivatives: amino acid surrogates for the inhibition of HIV-1 protease. Bioorg.Med.Chem.Lett. 5 721.

[2]. Yerino GA, Halabe EK, Zini E, Feleder EC.Bioequivalence study of two oral tablet formulations containing saquinavir mesylate boosted with ritonavir in healthy male subjects.Arzneimittelforschung. 2011;61(8):481-7.

[3]. Branham ML, Moyo T, Govender T.Preparation and solid-state characterization of ball milled saquinavir mesylate for solubility enhancement.Eur J Pharm Biopharm. 2012 Jan;80(1):194-202.

[4]. Brouwers J, Vermeire K, Grammen C, Schols D, Augustijns P.Early identification of availability issues for poorly water-soluble microbicide candidates in biorelevant media: a case study with saquinavir.Antiviral Res. 2011 Aug;91(2):217-23.

[5]. Knechten H, Lutz T, Pulik P, Martin T, Tappe A, Jaeger H.Safety and Efficacy in HIV-1-Infected Patients Treated with Ritonavir-Boosted Saquinavir Mesylate.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA