Atazanavir sulfate

Cat. No.: HY-17367A

CAS No.: 229975-97-7

Molecular Formula: $C_{38}H_{54}N_6O_{11}S$

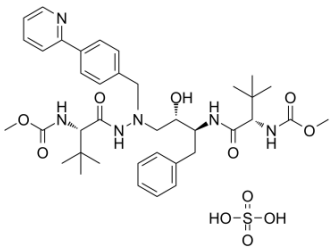
Molecular Weight: 802.93

Target: HIV; HIV Protease; SARS-CoV; Cytochrome P450; P-glycoprotein

Pathway: Anti-infection; Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel

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 : 166 mg/mL (206.74 mM; Need ultrasonic and warming)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.2454 mL	6.2272 mL	12.4544 mL
5 mM	0.2491 mL	1.2454 mL	2.4909 mL
10 mM	0.1245 mL	0.6227 mL	1.2454 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: ≥ 2.5 mg/mL (3.11 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.11 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.11 mM); Clear solution
4. Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
   Solubility: ≥ 2.5 mg/mL (3.11 mM); Clear solution
5. Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Atazanavir (BMS-232632) sulfate, a highly selective HIV-1 protease inhibitor, is the first protease inhibitor approved for once-daily administration[1]. Atazanavir sulfate is a substrate and inhibitor of CYP3A4, and an inhibitor and inducer of P-

	glycoprotein (P-gp)[2]. Atazanavir sulfate is also a SARS-CoV 3CL^{pro} inhibitor with an IC_{50} of 3.49 μM[3].
IC_{50} & Target	HIV-1 protease[1] CYP3A4, P-gp[2]

CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2021 May 29;6(1):212.
- Nat Commun. 2020 Sep 4;11(1):4417.
- PLoS Biol. 2020 Jan 16;18(1):e3000599.
- Antimicrob Agents Chemother. 2020 Aug 20;64(9):e00872-20.
- Int J Antimicrob Agents. 2019 Dec;54(6):814-819.

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REFERENCES

[1]. Havlir DV, et al. Atazanavir: new option for treatment of HIV infection. Clin Infect Dis. 2004 Jun 1;38(11):1599-604.

[2]. Wood R. Atazanavir: its role in HIV treatment. Expert Rev Anti Infect Ther. 2008 Dec;6(6):785-96.

[3]. 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.

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