# Atazanavir sulfate

**Cat. No.:** HY-17367A

**CAS No.:** 229975-97-7

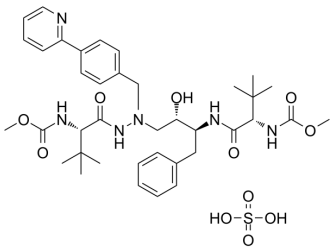
**Molecular Formula:** $C_{38}H_{54}N_6O_{11}S$

**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:** 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 : 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]<br>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.

See more customer validations on www.MedChemExpress.com

## 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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