



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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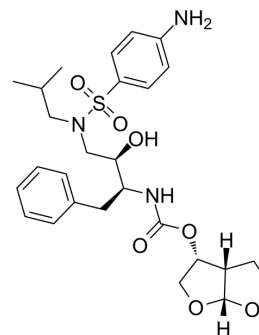
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## Darunavir

<b>Cat. No.:</b>	HY-17040		
<b>CAS No.:</b>	206361-99-1		
<b>Molecular Formula:</b>	C <sub>27</sub> H <sub>37</sub> N <sub>3</sub> O <sub>7</sub> S		
<b>Molecular Weight:</b>	547.66		
<b>Target:</b>	HIV; HIV Protease		
<b>Pathway:</b>	Anti-infection; Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (182.60 mM)  
 \* "≥" means soluble, but saturation unknown.

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		1.8260 mL	9.1298 mL	18.2595 mL
	5 mM		0.3652 mL	1.8260 mL	3.6519 mL
	10 mM		0.1826 mL	0.9130 mL	1.8260 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 (4.56 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (4.56 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (4.56 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Darunavir (TMC114), an orally active next generation HIV protease inhibitor, has a similar antiviral activity against the mutant and the wild-type viruses. Darunavir (TMC114) is potent against laboratory HIV-1 strains and primary clinical isolates (IC<sub>50</sub> = 0.003 μM; IC<sub>90</sub> = 0.009 μM) with minimal cytotoxicity<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

HIV-1

#### In Vitro

Darunavir (TMC114, 1a) has a stability comparable to other protease inhibitors<sup>[1]</sup>.

Darunavir (TMC114, UIC-94017) blocks the infectivity and replication of each of HIV-1<sub>NL4-3</sub> variants exposed to and selected for resistance to Ro 31-8959, MK-639, AG1341, or ABT 538 at concentrations up to 5  $\mu$ M (IC<sub>50</sub>s, 0.003 to 0.029  $\mu$ M), although it was less active against HIV-1<sub>NL4-3</sub> variants selected for resistance to VX-478 (IC<sub>50</sub>, 0.22  $\mu$ M)<sup>[2]</sup>.

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.
- Int J Antimicrob Agents. 2019 Dec;54(6):814-819.
- Aging Cell. 2022 Dec 20;e13750.
- Antiviral Res. 2022 Nov 10;105463.

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

## REFERENCES

[1]. Dominique L N G Surleraux, et al. Discovery and selection of TMC114, a next generation HIV-1 protease inhibitor. J Med Chem. 2005 Mar 24;48(6):1813-22.

[2]. Yasuhiro Koh, et al. Novel bis-tetrahydrofuranylurethane-containing nonpeptidic protease inhibitor (PI) UIC-94017 (TMC114) with potent activity against multi-PI-resistant human immunodeficiency virus in vitro. Antimicrob Agents Chemother. 2003 Oct;47(10):3123-9.

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

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