



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

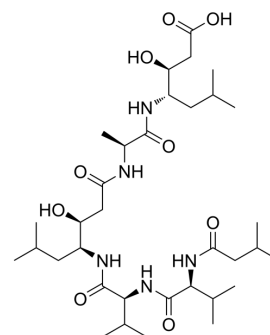
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Pepstatin

Cat. No.:	HY-P0018
CAS No.:	26305-03-3
Molecular Formula:	C ₃₄ H ₆₃ N ₅ O ₉
Molecular Weight:	685.89
Sequence:	IsoValeryl-Val-Val-Sta-Ala-Sta-OH
Sequence Shortening:	IsoVeryl-VV-Sta-A-Sta-OH
Target:	HIV Protease; Autophagy
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Autophagy
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 31.25 mg/mL (45.56 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.4580 mL	7.2898 mL	14.5796 mL
	5 mM	0.2916 mL	1.4580 mL	2.9159 mL
	10 mM	0.1458 mL	0.7290 mL	1.4580 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 50% PEG300 >> 50% saline
Solubility: 5 mg/mL (7.29 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 2.08 mg/mL (3.03 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (3.03 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (3.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pepstatin (Pepstatin A) is a specific, orally active aspartic protease inhibitor produced by actinomycetes, with IC₅₀s of 4.5 nM, 6.2 nM, 150 nM, 290 nM, 520 nM and 260 nM for hemoglobin-pepsin, hemoglobin-proctase, casein-pepsin, casein-proctase, casein-acid protease and hemoglobin-acid protease, respectively. Pepstatin also inhibits HIV protease^{[1][2]}.

IC₅₀ & Target	IC ₅₀ : 4.5 nM (Hemoglobin-pepsin), 6.2 nM (Hemoglobin-proctase), 150 nM (Casein-pepsin), 260 nM (Hemoglobin-acid protease), 290 nM (Casein-proctase), 520 nM (Casein-acid protease) ^[1]								
In Vitro	Pepstatin (Pepstatin A) (7 μM; 48 h) affects the intracellular processing of HIV-specific gag protein ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	<p>Pepstatin (Pepstatin A) has a very low toxicity, with LD₅₀s of 1090 mg/kg, 875 mg/kg, 820 mg/kg and 450 mg/kg for mice, rats, rabbits, and dogs by i.p. route, and > 2000 mg/kg for all species by oral route^[1].</p> <p>Pepstatin (0.5-50 mg/kg, p.o.) suppresses stomach ulceration of the pylorus in ligated Shay rats^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Pylorus ligated male Wistar rats^[1]</td> </tr> <tr> <td>Dosage:</td> <td>0.5, 1, 10 and 50 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Oral administration, 15 minutes after pyloric ligation</td> </tr> <tr> <td>Result:</td> <td>Effectively prevented stomach ulceration.</td> </tr> </table>	Animal Model:	Pylorus ligated male Wistar rats ^[1]	Dosage:	0.5, 1, 10 and 50 mg/kg	Administration:	Oral administration, 15 minutes after pyloric ligation	Result:	Effectively prevented stomach ulceration.
Animal Model:	Pylorus ligated male Wistar rats ^[1]								
Dosage:	0.5, 1, 10 and 50 mg/kg								
Administration:	Oral administration, 15 minutes after pyloric ligation								
Result:	Effectively prevented stomach ulceration.								

CUSTOMER VALIDATION

- ACS Nano. 2024 Jun 13.
- ACS Nano. 2024 Jan 10.
- Adv Sci (Weinh). 2023 Oct;10(28):e2302130.
- Adv Sci (Weinh). 2022 Oct 10;e2203831.
- Sci Adv. 2022 Nov 11;8(45):eabn6579.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Umezawa H, et al. Pepstatin, a new pepsin inhibitor produced by Actinomycetes. J Antibiot (Tokyo). 1970 May;23(5):259-62.
- [2]. Seelmeier S, et al. Human immunodeficiency virus has an aspartic-type protease that can be inhibited by pepstatin A. Proc Natl Acad Sci U S A. 1988 Sep;85(18):6612-6.

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