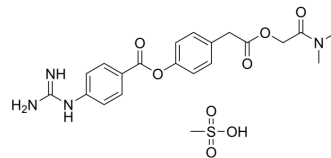


Camostat mesylate

Cat. No.:	HY-13512
CAS No.:	59721-29-8
Molecular Formula:	C ₂₁ H ₂₆ N ₄ O ₈ S
Molecular Weight:	494.52
Target:	Ser/Thr Protease; SARS-CoV
Pathway:	Metabolic Enzyme/Protease; Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 1 years; -20°C, 6 months (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (252.77 mM; Need ultrasonic)
 H₂O : ≥ 50 mg/mL (101.11 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.0222 mL	10.1108 mL	20.2216 mL
	5 mM	0.4044 mL	2.0222 mL	4.0443 mL
	10 mM	0.2022 mL	1.0111 mL	2.0222 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 12.5 mg/mL (25.28 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (4.21 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (4.21 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (4.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Camostat mesylate (Camostat mesilate) is an orally active, synthetic serine protease inhibitor for chronic pancreatitis. Camostat mesylate, an inhibitor of TMPRSS2, shows antiviral activity against SARS-CoV-2. Camostat mesylate also inhibits the activity of prostatic, trypsin, and matriptase^{[1][2][3]}.

In Vitro

Camostat mesylate (Camostat mesilate) inhibits both monocyte chemoattractant protein-1 (MCP-1) and TNF-α production

from monocytes, and proliferation and MCP-1 production from PSCs^[1].
Camostat mesilate, a trypsin-like protease inhibitor, provides a potent (IC₅₀=50 nM) and prolongs attenuation of ENaC function in human airway epithelial cell models that is reversible upon the addition of excess trypsin^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Camostat mesilate (30 mg/kg; p.o.; twice a day for 9 days) blocks the spread and pathogenesis of SARS-CoV in a pathogenic mouse model^[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6-8 week old female BALB/c mice (lethal SARS-CoV infection model) ^[4]
Dosage:	30 mg/kg
Administration:	P.o.; twice a day for 9 days
Result:	Effective in protecting mice against death due to a lethal infection by SARS-CoV, with a survival rate of ~60%.

CUSTOMER VALIDATION

- Nature. 2022 Mar;603(7902):693-699.
- Cell. 2023 Feb 16;186(4):850-863.e16.
- Signal Transduct Target Ther. 2022 Mar 11;7(1):83.
- Cell Discov. 2021 Dec 14;7(1):119.
- Nat Commun. 2022 Jul 26;13(1):4331.

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REFERENCES

- [1]. Gibo J, et al. Camostat mesilate attenuates pancreatic fibrosis via inhibition of monocytes and pancreatic stellate cells activity. Lab Invest. 2005;85(1):75-89.
- [2]. Uno Y. Camostat mesilate therapy for COVID-19 [published online ahead of print, 2020 Apr 29]. Intern Emerg Med. 2020;1-2.
- [3]. Coote K, et al. Camostat attenuates airway epithelial sodium channel function in vivo through the inhibition of a channel-activating protease. J Pharmacol Exp Ther. 2009;329(2):764-774.
- [4]. Zhou Y, Vedantham P, Lu K, et al. Protease inhibitors targeting coronavirus and filovirus entry. Antiviral Res. 2015;116:76-84.

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

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