Small Molecules

Camostat

Inhibits transmembrane serine protease (TMPRSS2)

Catalog #100-0552	10 mg
100-0553	50 mg

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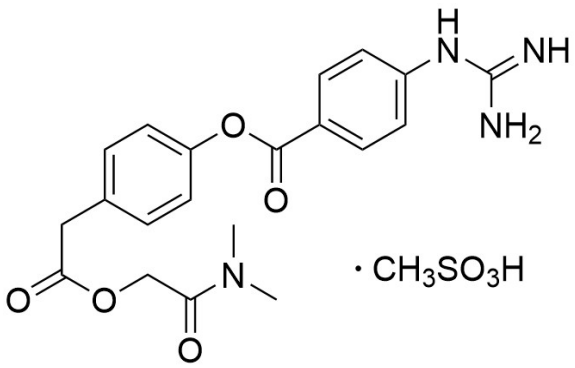
Product Description

Camostat is a serine protease inhibitor with antiviral properties (Coote et al.; Hoffmann et al.). It inhibits the transmembrane serine protease TMPRSS2, which is involved in viral infections such as COVID-19 (Hoffmann et al.). This product is supplied as the mesylate salt of the molecule.

Molecular Name:	Camostat (Mesylate)
Alternative Names:	Foipan; FOY 305
CAS Number:	59721-29-8
Chemical Formula:	$C_{20}H_{22}N_4O_5 \bullet CH_3SO_3H$
Molecular Weight:	494.5 g/mol
Purity:	≥ 98%
Chemical Name:	4-[[4-[(aminoiminomethyl)amino]benzoyl]oxy]-benzeneacetic acid, 2-(dimethylamino)-2-oxoethyl ester, monomethanesulfonate

Structure:



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	• DMSO ≤ 50 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 202 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

IMMUNOLOGY
· Inhibits MCP-1 and TNF-alpha production in monocytes (Gibo et al.).
DISEASE MODELING
· Inhibits the proliferation and activation of pancreatic stellate cells in rats (Emori et al.).

References

Coote K et al. (2009) Camostat attenuates airway epithelial sodium channel function in vivo through the inhibition of a channel-activating protease. J Pharmacol Exp Ther 329(2): 764–74.

Emori Y et al. (2005) Camostat, an oral trypsin inhibitor, reduces pancreatic fibrosis induced by repeated administration of a superoxide dismutase inhibitor in rats. J Gastroenterol Hepatol 20(6): 895–9.

Gibo J et al. (2005) Camostat mesilate attenuates pancreatic fibrosis via inhibition of monocytes and pancreatic stellate cells activity. Lab Invest 85(1): 75–89.

Hoffmann M et al. (2020) SARS-CoV-2 cell entry depends on ACE2 and TMPRSS2 and is blocked by a clinically proven protease inhibitor. Cell 181(2): 271–80.e8.

Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).