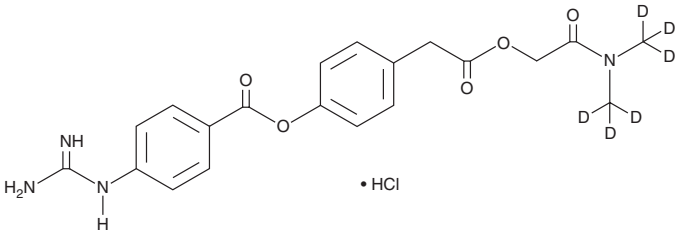
PRODUCT INFORMATION

Camostat-d_6 (hydrochloride)

Item No. 30984

CAS Registry No.: 2930627-60-2
Formal Name: 4-[[4-[(aminoiminomethyl)amino]benzoyl] oxy]-benzeneacetic acid, 2-(di(methyl-d_3) amino)-2-oxoethyl ester, monohydrochloride
MF: $C_{20}H_{16}D_6N_4O_5 \bullet HCl$
FW: 440.9
Chemical Purity: ≥95% (Camostat)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Camostat-d_6 (hydrochloride) is intended for use as an internal standard for the quantification of camostat (Item No. 16018) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Camostat-d_6 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the camostat-d_6 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Camostat-d_6 (hydrochloride) is soluble in organic solvents such as methanol and DMSO.

Description

Camostat is a protease inhibitor.[1,2] It inhibits trypsin (K_i = 1 nM), as well as various inflammatory proteases, including plasmin, kallikrein, and thrombin. Camostat (50 µM) inhibits entry of vesicular stomatitis virus (VSV) particles pseudotyped with severe acute respiratory syndrome coronavirus (SARS-CoV) and SARS-CoV-2 spike glycoprotein in Calu-3 cells and primary human lung epithelial cells.[3] It reduces the number of SARS-CoV-2 genomic equivalents, a marker of infection, in Calu-3 cells. Camostat inhibits sodium channel function in human airway epithelial cells (IC_{50} = 50 nM) and enhances mucociliary clearance in sheep.[1] Dietary administration of camostat (1 mg/kg) inhibits the production of TNF-α and chemokine (C-C motif) ligand 2 (CCL2) by monocytes, as well as proliferation of pancreatic stellate cells in a rat model of pancreatic fibrosis.[2]

References

1. Coote, K., Atherton-Watson, H.C., Sugar, R., *et al.* Camostat attenuates airway epithelial sodium channel function in vivo through the inhibition of a channel-activating protease. *J. Pharmacol. Exp. Ther.* **329(2)**, 764-774 (2009).
2. Gibo, J., Ito, T., Kawabe, K., *et al.* Camostat mesilate attenuates pancreatic fibrosis via inhibition of monocytes and pancreatic stellate cells activity. *Lab Invest.* **85(1)**, 75-89 (2005).
3. Hoffmann, M., Kleine-Weber, H., Schroeder, S., *et al.* SARS-CoV-2 cell entry depends on ACE2 and TMPRSS2 and is blocked by a clinically proven protease inhibitor. *Cell* **181(2)**, 271-280 (2020).

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