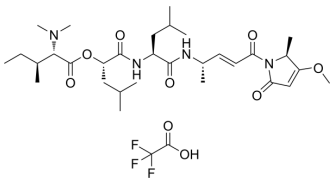
Gallinamide A TFA

Cat. No.:	HY-N10109A
CAS No.:	1352920-57-0
Molecular Formula:	$C_{33}H_{53}F_3N_4O_9$
Molecular Weight:	706.79
Target:	SARS-CoV; Parasite; Cathepsin
Pathway:	Anti-infection; Metabolic Enzyme/Protease
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



BIOLOGICAL ACTIVITY

Description	Gallinamide A TFA is a linearly depositing peptide and a potent inhibitor of cathepsin L (CatL) (IC_{50}: 17.6 pM). Gallinamide A TFA inhibits SARS-CoV-2 infection by inhibiting CatL (EC_{50}: 28 nM). Gallinamide A TFA also inhibits Plasmodium falciparum (IC_{50}: 50 nM)[1][2].
IC_{50} & Target	IC50: 17.6 pM (Cathepsin L); 7.34 nM (Cathepsin B); 697 nM (Cathepsin V); 79.6 nM (Cathepsin K); 367 pM (Cathepsin S)[1] EC50: 28 nM (SARS-CoV-2)[1] IC50: 50 nM (P. falciparum)[2]
In Vitro	Gallinamide A TFA has low cytotoxicity with CC_{50} >100 μM in VeroE6 cells. Gallinamide A TFA (0.5 μM; 96 h) can inhibit CatL-mediated SARS-CoV-2 endosome entry into VeroE6 cells[1]. Gallinamide A TFA also mesylate with the TMPRSS2 inhibitor Nafamostat (HY-B0190A) exhibits synergistic effects. Potent antiviral activity in HEK-ACE2-TMPRSS2 cells, but ineffective in VeroE6 cell line[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ashhurst AS, et al. Potent in vitro anti-SARS-CoV-2 activity by gallinamide A and analogues via inhibition of cathepsin L. bioRxiv [Preprint]. 2020 Dec 24:2020.12.23.424111.

[2]. Stoye A, et al. Falcipain Inhibitors Based on the Natural Product Gallinamide A Are Potent in Vitro and in Vivo Antimalarials. J Med Chem. 2019 Jun 13;62(11):5562-5578.

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