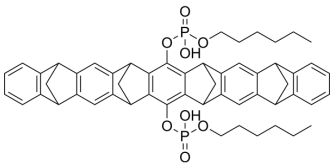
SARS-CoV-2-IN-27

Cat. No.:	HY-151271
Molecular Formula:	$C_{54}H_{56}O_8P_2$
Molecular Weight:	894.97
Target:	SARS-CoV
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	SARS-CoV-2-IN-27 is a two-armed diphosphate ester with C6 alkyl and molecular tweezers with extended length. SARS-CoV-2-IN-27 exhibits antiviral activity with IC_{50}s of 1.0 μM and 1.7 μM against SARS-CoV-2 activity and the spike pseudoparticle transduction, respectively. SARS-CoV-2-IN-27 induces liposomal membrane disruption with an EC_{50} value of 6.5 μM[1].
IC_{50} & Target	IC50: 6.5 μM (viral liposome, SARS-CoV-2)[1]

In Vitro

SARS-CoV-2-IN-27 (CP019) inhibits SARS-CoV-2 (IC_{50}=1.7 μM) with few cytotoxicity (Caco2 cells, CC_{50}=208 μM)[1].
SARS-CoV-2-IN-27 (0-15 μM; 2 h) inactivate SARS-CoV-2, shows inhibition against infection with an IC_{50} value of 1.0 μM[1].
SARS-CoV-2-IN-27 suppresses varies enveloped viruses activity with IC_{50}s of 7.4 μM (respiratory syncytial virus, RSV), 112.6 μM (influenza A virus, IAV), 4.6 μM (measles virus, MeV), 1.8 μM (herpes simplex viruses, HSV-1), respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Caco2 cells exposed with SARS-CoV-2 (2 h, 37 ⊠)
Concentration:	0, 0.23, 0.93, 3.75, 15 μM
Incubation Time:	2 hours; determined infection rates on day 2
Result:	Inhibited SARS-CoV-2 infection activity to Caco2 cells.

In Vivo

SARS-CoV-2-IN-27 (CP019) (150 μM, 50 μL; intranasal route; for 2-5 d) shows antiviral activity in vivo against respiratory syncytial virus (RSV) and SARS-CoV-2 in BALB/cJ mice or K18-hACE2 mice, respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Respiratory syncytial virus (RSV) infection of BALB/cJ mice and SARS-CoV-2 infection of K18-hACE2 mice[1]
Dosage:	150 μM, 50 μL
Administration:	Intranasal route; single dose; sacrificed BALB/cJ mice on day 5; treated K18-hACE2 mice once again after 7 h and sacrificed mice on day 2

Result:	Reduced viral load in the lungs of SARS-CoV-2-infected mice. Completely abolished SARS-CoV-2 infection of all tested mice without changing body weight of mice.

REFERENCES

[1]. Tatjana Weil, et al. Advanced Molecular Tweezers with Lipid Anchors against SARS-CoV-2 and Other Respiratory Viruses. JACS Au 2022, XXXX, XXX, XXX-XXX.

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