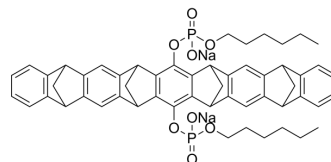


SARS-CoV-2-IN-27 disodium

Cat. No.:	HY-151271A
Molecular Formula:	C ₅₄ H ₅₄ Na ₂ O ₈ P ₂
Molecular Weight:	938.93
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 disodium is a two-armed diphosphate ester with C6 alkyl and molecular tweezers with extended length. SARS-CoV-2-IN-27 disodium 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 disodium induces liposomal membrane disruption with an EC ₅₀ value of 6.5 μM ^[1] .								
IC₅₀ & Target	IC ₅₀ : 6.5 μM (viral liposome, SARS-CoV-2) ^[1]								
In Vitro	<p>SARS-CoV-2-IN-27 (CP019) disodium inhibits SARS-CoV-2 (IC₅₀=1.7 μM) with few cytotoxicity (Caco2 cells, CC₅₀=208 μM)^[1]. SARS-CoV-2-IN-27 disodium (0-15 μM; 2 h) inactivate SARS-CoV-2, shows inhibition against infection with an IC₅₀ value of 1.0 μM^[1].</p> <p>SARS-CoV-2-IN-27 disodium suppresses various enveloped viruses activity with IC₅₀s 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.</p> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Caco2 cells exposed with SARS-CoV-2 (2 h, 37 °C)</td> </tr> <tr> <td>Concentration:</td> <td>0, 0.23, 0.93, 3.75, 15 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>2 hours; determined infection rates on day 2</td> </tr> <tr> <td>Result:</td> <td>Inhibited SARS-CoV-2 infection activity to Caco2 cells.</td> </tr> </table>	Cell Line:	Caco2 cells exposed with SARS-CoV-2 (2 h, 37 °C)	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.
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In Vivo	<p>SARS-CoV-2-IN-27 (CP019) disodium (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.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Respiratory syncytial virus (RSV) infection of BALB/cJ mice and SARS-CoV-2 infection of K18-hACE2 mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>150 μM, 50 μL</td> </tr> <tr> <td>Administration:</td> <td>Intranasal route; single dose; sacrificed BALB/cJ mice on day 5; treated K18-hACE2 mice</td> </tr> </table>	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		
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	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.

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

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