

Influenza A virus-IN-8

Cat. No.:	HY-149034
Molecular Formula:	C ₁₀₄ H ₁₄₂ N ₂₈ O ₂₄ S
Molecular Weight:	2200.48
Target:	Influenza Virus
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Influenza A virus-IN-8 (S5) is a macrocyclic peptide with no cytotoxic. Influenza A virus-IN-8 is also a potent Influenza A Virus (IAV) inhibitor (with sufficient protease stability) with IC ₅₀ s of 6.7 and 6.6 nM for H1 and H5 variants, respectively. Influenza A virus-IN-8 shows good affinitiescan to H1 variants, binds to a conserved region in the HA stem with a K _d of 1.0 nM ^[1] .																						
In Vitro	<p>Influenza A virus-IN-8 (5 μM; 72 h) does not affect viability of HeLa and MDCKI cells^[1].</p> <p>Influenza A virus-IN-8 (5 μM; 24 h) shows neutralizing effect on H1N1pdm09 and H5N1 in a dose-dependent manner^[1].</p> <p>Influenza A virus-IN-8 (5 nM; 2 h) binds to a conserved region in the HA stem with K_d of 1.0 nM for H1 variants^[1].</p> <p>Influenza A virus-IN-8 (5 μM; 1 h) inhibits HA fusion activity during entry by stabilizing the prefusion conformation^[1].</p> <p>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>HeLa and MDCKI cells</td> </tr> <tr> <td>Concentration:</td> <td>5 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>72 h</td> </tr> <tr> <td>Result:</td> <td>Exhibited no detectable cytotoxicity in HeLa and MDCKI cells.</td> </tr> </table> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MDCK-II cells (ATCC; H1N1pdm09 and H5N1 infection)</td> </tr> <tr> <td>Concentration:</td> <td>5 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Against H1N1pdm09 and H5N1 in MDCK-II cells in a dose-dependent manner.</td> </tr> </table> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MDCKI cells (transfected the pFRT expression plasmids encoding the full-length H1)</td> </tr> <tr> <td>Concentration:</td> <td>5 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>2 h</td> </tr> </table>	Cell Line:	HeLa and MDCKI cells	Concentration:	5 μM	Incubation Time:	72 h	Result:	Exhibited no detectable cytotoxicity in HeLa and MDCKI cells.	Cell Line:	MDCK-II cells (ATCC; H1N1pdm09 and H5N1 infection)	Concentration:	5 μM	Incubation Time:	24 h	Result:	Against H1N1pdm09 and H5N1 in MDCK-II cells in a dose-dependent manner.	Cell Line:	MDCKI cells (transfected the pFRT expression plasmids encoding the full-length H1)	Concentration:	5 nM	Incubation Time:	2 h
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Result:	Decreased the staining of full length, membrane-bound H1 HA expressed on the surface of MDCK cells, and binded to a conserved region in the HA stem with K_d of 1.0 nM.
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Cell Viability Assay^[1]

Cell Line:	MDCKI cells
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Concentration:	5 μ M
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Incubation Time:	1 h
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Result:	Exhibited aeffect on surpressing HA fusion activity during entry by stabilizing the prefusion conformation in MDCKI cells.
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REFERENCES

[1]. Pascha MN, et al. Inhibition of H1 and H5 Influenza A Virus Entry by Diverse Macrocyclic Peptides Targeting the Hemagglutinin Stem Region. ACS Chem Biol. 2022 Aug 4.

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

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