# DENV-IN-4

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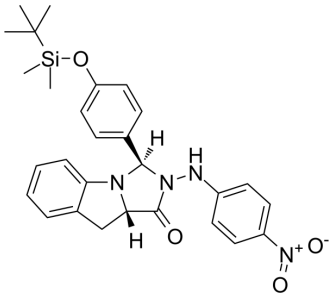
| **Cat. No.:** | HY-115929 |
| **CAS No.:** | 2762302-75-8 |
| **Molecular Formula:** | $C_{28}H_{32}N_4O_4Si$ |
| **Molecular Weight:** | 516.66 |
| **Target:** | DNA/RNA Synthesis |
| **Pathway:** | Cell Cycle/DNA Damage |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

**Description**

DENV-IN-4 is a potent DENV inhibitor (DENV $EC_{50}$=4.79 μM, Vero $CC_{50}$>100 μM, SI>20.9). DENV-IN-4 can inhibit the expression level of DENV2 with concentration-dependence and reduce RNA-dependent RNA polymerase (RdRp) enzymatic activity. DENV-IN-4 has antiviral effect[1].

**$IC_{50}$ & Target**

$EC_{50}$=4.79 μM (DENV)[1]

**In Vitro**

DENV-IN-4 (compound 15) (0.064-200 μM; 3 days) has antiviral effect and not related to its toxicity (DENV $EC_{50}$=4.79 μM, Vero $CC_{50}$>100, SI>20.9)[1].

DENV-IN-4 (3.125-50 μM in Vero, 3.75-30 μM in A549 and Huh-7; 48 hours) inhibits the expression level of DENV2 with concentration-dependence, and inhibition curves were smoother in Vero[1].

DENV-IN-4 (7.5 and 15 μM; 48 hours) can effectively inhibit DENV infection in Vero cells, and completely inhibited at 15 μM[1].

DENV-IN-4 (0-15 μM; 48 hours) inhibits DENV2 E protein production with good concentration-dependent relationship in Vero cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay

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| Cell Line: | Vero[1] |
| Concentration: | 0.064-200 μM |
| Incubation Time: | 3 days |
| Result: | Showed antiviral effect of DENV-IN-4 was not related to its toxicity (Vero $EC_{50}$=4.79 μM, $CC_{50}$>100, SI>20.9). |

RT-PCR

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| Cell Line: | Vero, A549 and Huh-7 cells[1] |
| Concentration: | 3.125-50 μM in Vero, 3.75-30 μM in A549 and Huh-7 |
| Incubation Time: | 48 hours |
| Result: | Inhibited the expression level of DENV2 with concentration-dependence, and inhibition curves were smoother in Vero. |

| Western Blot Analysis | |
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| Cell Line: | Vero[1] |
| Concentration: | 7.5 and 15 μM |
| Incubation Time: | 48 hours |
| Result: | Effectively inhibited DENV infection and completely inhibited at 15 μM. |

| Immunofluorescence | |
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| Cell Line: | Vero[1] |
| Concentration: | 0-15 μM |
| Incubation Time: | 48 hours |
| Result: | Inhibited DENV2 E protein production with good concentration-dependent relationship. |

## REFERENCES

[1]. Qian W, et al. Design, synthesis, discovery and SAR of the fused tricyclic derivatives of indoline and imidazolidinone against DENV replication and infection [published online ahead of print, 2022 Jan 24]. Bioorg Chem. 2022;120:105639.



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