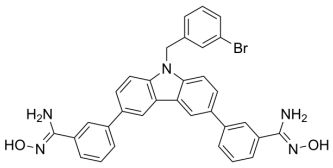
SP-471P

Cat. No.:	HY-144645
CAS No.:	2768011-36-3
Molecular Formula:	$C_{33}H_{26}BrN_5O_2$
Molecular Weight:	604.5
Target:	Virus Protease; DNA/RNA Synthesis; Flavivirus; Dengue virus
Pathway:	Anti-infection; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	SP-471P is a potent dengue virus (DENV) protease inhibitor with EC_{50}s of 5.9 μM, 1.4 μM, 5.1 μM and 1.7 μM for DENV1, DENV2, DENV3 and DENV4, respectively and CC_{50} value over 100 μM. SP-471P can reduce DENV viral RNA synthesis[1].
IC_{50} & Target	EC_{50}: 5.9 μM (DENV1), 1.4 μM (DENV2), 5.1 μM (DENV3), 1.7 μM (DENV4)[1]

In Vitro

SP-471P (0-10 μM) shows low micromolar efficacy for DENV1, DENV2, DENV3 and DENV4 with EC_{50}s of 5.9 μM, 1.4 μM, 5.1 μM and 1.7 μM, respectively[1].

SP-471P (10 μM; 48 hours) exhibits an EC_{50} value of 1.5 μM for ADE infection in human peripheral blood mononuclear cells[1].

SP-471P (10 μM; 6-54 hours) reduces viral RNA synthesis of DENV2[1].

SP-471P (10 μM; 30 hours) targets the $NS3_{int}$ cleavage site of DENV in DENV2-infected Huh7 cells[1].

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

Cell Viability Assay

Cell Line:	Human peripheral blood mononuclear cells (infected with ADE)[1]
Concentration:	10 μM
Incubation Time:	48 hours
Result:	Resulted in an EC_{50} value of 1.5 μM for ADE infection in human PBMCs.

RT-PCR

Cell Line:	Huh7 (infected with DENV2 at MOI 1 for 6 hours)[1]
Concentration:	10 μM
Incubation Time:	6-54 hours
Result:	Reduced viral RNA synthesis.

Western Blot Analysis

Cell Line:	Huh7 (infected with DENV2 at MOI 1 for 6 hours)[1]

Concentration:	10 μM
Incubation Time:	30 hours
Result:	Targeted the $NS3_{int}$ cleavage site of DENV.

REFERENCES

[1]. Swarbrick C, Zogali V, Chan KWK, et al. Amidoxime prodrugs convert to potent cell-active multimodal inhibitors of the dengue virus protease. Eur J Med Chem. 2021;224:113695.

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