HCVcc-IN-2

Cat. No.: HY-151589

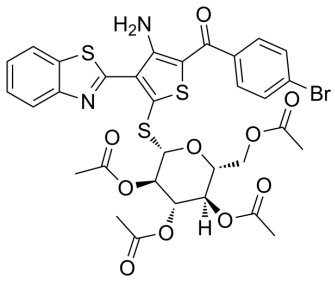
Molecular Formula: $C_{32}H_{29}BrN_2O_{10}S_3$

Molecular Weight: 777.68

Target: Virus Protease

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

HCVcc-IN-2 is a benzothiazole-2-thiophene S-glycoside derivative with antitumor and antiviral activity. HCVcc-IN-2 has high inhibition against the three cell line from CNS cancer (SF-539 and SNB-75), colon cancer (HCT-116), and renal cancer (A498) [1].

In Vitro

HCVcc-IN-2 (compound 6c) (0.1, 1, 10, and 100 μg/mL; 1 h) shows antiviral activities against a variety of viruses such as coxsackievirus B4 (CBV4), hepatitis A virus HM 175 (HAV), hepatitis C genotype 4 (HCVcc), adenovirus type 7 (HAdV7), and herpes simplex virus 1 (HSV-1) with viral reduction rates of 83.3%, 63.3%, 40%, 63.3%, and 30%, respectively[1].

HCVcc-IN-2 (0.55-1.9 μg/mL; 1 h) inhibits various virus with IC_{50} of 0.55 μg/mL (herpes simplex virus), 0.76 μg/mL (HCVcc genotype virus), and 0.76 μg/mL (coxsackievirus B4), respectively; or with CC_{50} of 1.8 μg/mL (herpes simplex virus), 1.9 μg/mL (HCVcc genotype virus), and 1.9 μg/mL (coxsackievirus B4), respectively[1].

HCVcc-IN-2 (7.68-16.01 μg/mL;) inhibits hepatitis C virus NS3/4A and HSV- USP7 protease enzyme with IC_{50}s of 16.01 μg/mL and 7.68 μg/mL[1].

HCVcc-IN-2 (0.01 mM; 24 h) has low cytotoxicity, shows high inhibition against two cell lines, SK-MEL-5, OVCAR-4[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	FRHK-4, Hep2, BGM, Vero, and Huh 7.5 cell lines
Concentration:	100 μg/mL
Incubation Time:	24 hours
Result:	Showed nontoxic under the doses of 100 μg/mL against FRHK-4, Hep2, BGM, Vero, and Huh 7.5 cells, respectively.

Cell Viability Assay[1]

Cell Line:	SF-539, SNB-75, HCT-116, and A498
Concentration:	0.01 mM
Incubation Time:	24 hours
Result:	Inhibited SF-539, SNB-75, HCT-116, and A498 cell viability by 15.70%, 16.66%, 75.89%, and 58.5%, respectively.

REFERENCES

[1]. Azzam et al. Novel Thiophene Thioglycosides Substituted with the Benzothiazole Moiety: Synthesis, Characterization, Antiviral and Anticancer Evaluations, and NS3/4A and USP7 Enzyme Inhibitions. ACS Omega. 2022 Sep 29;7(40):35656-35667.

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