

Product Data Sheet

Product Name: VV261
Cat. No.: GC28055

Chemical Properties

Cas. No. 3003864-86-3

Chemical Name (2S,3S,4R,5R)-2-Fluoro-2-((isobutyryloxy)methyl)-5-(3-((nicotinoyloxy)methyl)-2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl)tetrahydrofuran-3,4-diyl bis(2-methylpropanoate)

SMILES O=C(C1=CC=CN=C1)OCN2C(N(C=CC2=O)[C@@H]3O[C@@](COC(C(C)C)=O)(F)[C@@H](OC(C(C)C)=O)[C@H]3OC(C(C)C)=O)=O

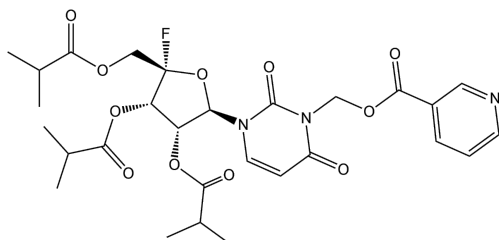
Formula $C_{28}H_{34}FN_3O_{11}$ M.Wt 607.58

Solubility DMSO : ≥ 100 mg/mL (164.59 mM) Storage 4°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

VV261 is an orally active prodrug of 4'-fluorouridine. VV261 inhibits viral RNA-dependent RNA polymerase. VV261 exhibits antiviral activity against CCHFV, SFTSV and LCMV. VV261 can be used in research related to viral infections^{[1][2]}.

In Vitro, VV261 (up to 200 μ M) potently inhibits CCHFV infection in HUVEC, with an EC₅₀ of 2.72 μ M. It exhibits extremely low cytotoxicity, with a selectivity index greater than 73.53^[1]. VV261 (2-50 μ M) inhibits the activity of CCHFV RdRp in BSR-T7/5 cells in a dose-dependent manner^[1]. VV261 (48 h) potently inhibits SFTSV replication in Vero-ATCC cells, with an EC₅₀ of 0.89 μ M^[2]. VV261 (48

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h) potentially inhibits LCMV replication in A549 cells, with an EC₅₀ of 0.15 µM^[2].

In Vivo, VV261 (1-10 mg/kg; p.o.; once daily; for 6 consecutive days) inhibits viral replication in a lethal CCHFV mouse model^[1]. VV261 (2.5-10 mg/kg; p.o.; once daily; for 7 consecutive days) exhibits dose-dependent anti-SFTSV efficacy in IFNAR1^{tm1Agt} mice^[2]. VV261 (1-5 mg/kg; p.o.; once daily; for 7 consecutive days) exhibits dose-dependent anti-LCMV efficacy in C57BL/6-Prf1^{tm1Sdz/J} mice^[2].

References:

[1]. Wang X, et al. Oral VV261 administration protects mice from lethal Crimean-Congo hemorrhagic fever virus challenge. J Virol. 2025 Dec 23;99(12):e0158325.

[2]. Cheng Y, et al. Design and Development of a Novel Oral 4'-Fluorouridine Double Prodrug VV261 against SFTSV. J Med Chem. 2025;68(9):9811-9826.

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