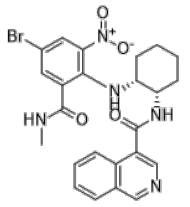
ProbeChem®
Expedite Your Scientific Research

Data Sheet

WWW.PROBECHEM.COM

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name : WU-04
Cat. No. : PC-49335
CAS No. : 2921711-74-0
Molecular Formula : $C_{24}H_{24}BrN_5O_4$
Molecular Weight : 526.391
Target : SARS-CoV-2 Inhibitors
Solubility : 10 mM in DMSO



CAS: 2921711-74-0

1. Hou N., et al. ***ACS Cent. Sci.*** 2023;9:217−227.

Biological Activity

WU-04 (WPV01) is a highly potent, non-covalent, orally active inhibitor of SARS-CoV-2 3C-like protease (**3CLpro**) with IC50 of 72 nM, binding Kd of 37 nM.
WU-04 inhibits the 3CLpro P132H mutant (SARS-CoV-2 Omicron variant) with an IC50 of 53 nM, similar to that against the wild-type 3CLpro.
WU-04 binds to the catalytic pocket of 3CLpro with a 1:1 ratio.
WU-04 potently inhibits the replication of SARS-CoV2 with EC50 of 12 nM, and EC90 of 36 nM in A549 cells (PF-07321332, EC50=117 nM), without cytotoxicity (CC50>20 uM), also exhibits a high potency against SARS-CoV-2 in primary normal human bronchial epithelial (NHBE) cells with EC50 of 3 nM, as well as in Vero E6 cells with an EC50 of 10 nM.
WU-04 demonstrates highly potent antiviral activity against the Delta variant and the Omicron variant (EC50=24 nM) in Caco-2 cells.
WU-04 is a pan-inhibitor of coronavirus 3CLpro, also potently inhibits the SARS-CoV 3CLpro with IC50 value of 55 nM, MERS-CoV 3CLpro with IC50 of 1 uM.
WU-04 shows anti-MERSCoV activity in Calu-3 cells and in Vero E6 cells with EC50 of 53 and 609 nM, respectively.
WU-04 (100, 200, or 300 mpk, twice daily, oral) demonstrated similar anti-SARS-CoV-2 activity with PF-07321332 (Nirmatrelvir) in K18-hACE2 mice.

References