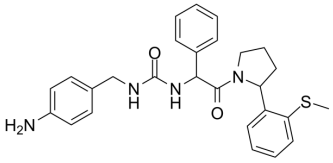
SMCypI C31

Cat. No.:	HY-125182
CAS No.:	2649904-85-6
Molecular Formula:	$C_{27}H_{30}N_4O_2S$
Molecular Weight:	474.62
Target:	HCV
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	SMCypI C31 is a non-peptidic cyclophilin inhibitor with potent peptidyl-prolyl cis/trans isomerases (PPIase) inhibitory activity (IC_{50} of 0.1 μM). SMCypI C31 shows pangenotype anti-HCV activity with EC_{50}s ranging from 1.20 to 7.76 μM for genotype 1a, 1b, 2a, 3a, and 5a HCV subgenomic replicons (HCV-SGRs) and chimeric genotype 2a/4a HCV-SGRs. SMCypI C31 disrupts the cyclophilin A-NS5A interaction[1][2].
IC_{50} & Target	IC50: 0.1 μM (Peptidyl-prolyl cis/trans isomerases (PPIase))[2]
In Vitro	SMCypI C31 (C31) inhibited the replication of genotype 1a, 1b, 2a, 3a, and 5a HCV-SGRs and chimeric genotype 2a/4a HCV-SGRs, with EC_{50} values of 3.80 μM, 2.95 μM, 2.30 μM, 7.76 μM, 1.20 μM and 1.40 μM, respectively[1]. SMCypI C31 also inhibits the replication of the infectious J6/JFH1 virus, with an EC_{50} of 2.80 μM. SMCypI C31 inhibits DBN-3acc RNA replication in a dose-dependent manner, with a maximal 244-fold HCV RNA reduction at 10 μM[1]. SMCypI C31 (C31) inhibits the replication of other members of the Flaviviridae family. SMCypI C31 inhibits viral replication of DENV (EC_{50} of 7.3 μM), YFV (EC_{50} of 27.2 μM), and ZIKV (EC_{50} of 48.0 μM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Quentin Nevers, et al. Characterization of the Anti-Hepatitis C Virus Activity of New Nonpeptidic Small-Molecule Cyclophilin Inhibitors with the Potential for Broad Anti-Flaviviridae Activity. Antimicrob Agents Chemother. 2018 Jun 26;62(7):e00126-18.

[2]. Abdelhakim Ahmed-Belkacem, et al. Fragment-based discovery of a new family of non-peptidic small-molecule cyclophilin inhibitors with potent antiviral activities. Nat Commun. 2016 Sep 22;7:12777.

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