Influenza A virus-IN-1

Cat. No.: HY-131179

CAS No.: 2250313-14-3

Molecular Formula: $C_{27}H_{20}F_6N_2O_3$

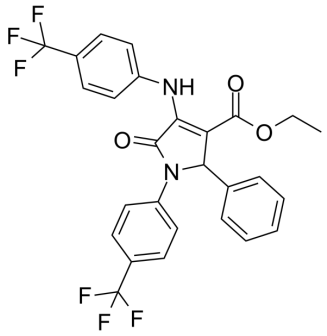
Molecular Weight: 534.45

Target: Influenza Virus

Pathway: Anti-infection

Storage: 4°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (187.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8711 mL	9.3554 mL	18.7108 mL
	5 mM	0.3742 mL	1.8711 mL	3.7422 mL
	10 mM	0.1871 mL	0.9355 mL	1.8711 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Influenza A virus-IN-1 is a dihydropyrrolidones derivative and is a potent inhibitor against wide subtypes of influenza A virus (IAV) with IC_{50} values from 3.11 μM to 7.13 μM. Influenza A virus-IN-1 efficiently inhibits replication of IAV, up-regulates the expression of key antiviral cytokines IFN-β and antiviral protein MxA[1].

IC_{50} & Target

IC50: 3.11 μM (A/Puerto Rico/8/34 (H1N1)), 3.58 μM (A/FM-1/1/47 (H1N1)), 5.26 μM (A/Aichi/2/68 (H3N2)), 6.48 μM (A/PR/8/34 (H1N1) with NA-H274Y) and 7.13 μM (The influenza A virus 690 (H3))

In Vitro

Influenza A virus-IN-1 (compound 5-2; 5-40 μM; 24 hours; MDCK cells) treatment significantly decreases the yields of influenza viral NP in a dose-dependent manner. And the expression level of NP protein could also be restrained in a dose-dependent manner[1].

Influenza A virus-IN-1 (compound 5-2) treatment reduces influenza HA mRNA expression at all three time points[1].

Influenza A virus-IN-1 (compound 5-2) could efficiently inhibit replication of IAV and suppress the production of the NDAPH oxidase NOX1 in MDCK cells[1].

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

Western Blot Analysis[1]

Cell Line:	IAV-infected MDCK cells
Concentration:	5 μM, 10 μM, 20 μM, 40 μM
Incubation Time:	24 hours
Result:	Significantly decreased the yields of influenza viral NP in a dose-dependent manner.

REFERENCES

[1]. Teng Liu, et al. Discovery of Dihydropyrrolidones as Novel Inhibitors Against Influenza A Virus. Eur J Med Chem. 2020 Aug 1;199:112334.

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