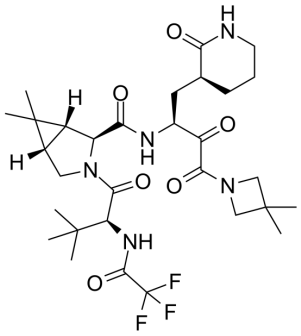
ML2006a4

Cat. No.:	HY-158073
CAS No.:	2943213-62-3
Molecular Formula:	$C_{30}H_{44}F_3N_5O_6$
Molecular Weight:	627.7
Target:	SARS-CoV
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

ML2006a4 is an orally active inhibitor for SARS-CoV-2 main protease (M^{pro}) with IC_{50} in picomolare value. ML2006a4 is cell permeable and antiviral active, that inhibits replication in SARS-CoV-2 in cells Huh7.5.1-ACE2-TMPRSS2 (Huh7.5.1++) in picomolare level[1]

In Vitro

ML2006a4 (0-10 μM) reveals an antiviral activity in cells Huh7.5.1++ and A549-ACE2 (A549+), with EC_{50}s of 100 and 120 nM, respectively[1].

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

In Vivo

ML2006a4 (20 mg/kg, i.v.) reveals a pharmacokinetic profils with an oral bioavailability of 27% (40 mg/kg, p.o.) and a plasma clearance rate C_{pl} of 39 mL/min/kg and Volume of distribution at steady state V_{ss} 0.66 L/kg[1].

ML2006a4 (40 mg/kg, p.o., twice a day for 4 days) ameliorates the SARS-CoV-2 infection, exhibits viral inhibitory and lung protective efficacy in BALB/c mice without significant toxicity[1].

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

Animal Model:	SARS-CoV-2 MA10 infected BALB/c mice[1]
Dosage:	40 mg/kg
Administration:	p.o., twice a day for 4 days
Result:	Reduced inflammation and respioratory epithelial injury, improved epithelial regeneration and the survival rates with minimal weight loss.

REFERENCES

[1]. Westberg M, et al., An orally bioavailable SARS-CoV-2 main protease inhibitor exhibits improved affinity and reduced sensitivity to mutations. Sci Transl Med. 2024 Mar 13;16(738):eadi0979.

Caution: Product has not been fully validated for medical applications. For research use only.

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