Anti-IAV agent 1

Cat. No.: HY-151967

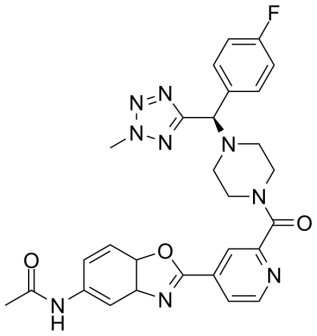
Molecular Formula: $C_{28}H_{28}FN_9O_3$

Molecular Weight: 557.58

Target: Influenza Virus

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Anti-IAV agent 1 (Compound (R)-1a) is an orally active anti-influenza A virus (IAV) agent with IC_{50}s of 0.03 and 0.06 μM against IAV H1N1 and Oseltamivir-resistant IAV H1N1 strains, respectively[1].

In Vivo

Anti-IAV agent 1 (Compound (R)-1a) (1.67-15 mg/kg; p.o.; twice daily for 7 days) shows anti-IAV activity in mice[1].

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

Animal Model:	Kunming Mice lethal challenge model with H1N1 A/Puerto Rico/8/1934 virus[1]
Dosage:	1.67, 5 and 15 mg/kg
Administration:	Oral administration, twice daily for 7 days
Result:	Improved the survival rate.

Animal Model:	Balb/c mice[1]
Dosage:	25 mg/kg
Administration:	Oral administration (Pharmacokinetic Analysis)
Result:	PK property in Balb/c mice after a single oral administration of 25 mg/kg, n = 3.

Compd.	$T_{1/2}$ (h)	T_{max} (h)	C_{max} (ng/mL)	AUC_{0-inf} (ng⋅h/mL)	[a]hERG IR (n = 3)
Anti-IAV agent 1 (Compound (R)-1a)	5.84 ± 0.63	0.33 ± 0	866 ± 205	1913 ± 554	13.2 ± 2.87%

[a]hERG ion channel inhibition rate at 10 μM, n = 3. Abbreviations: $T_{1/2}$, elimination half-life; T_{max}, the time at which the C_{max} is observed; C_{max}, the maximum serum concentration; AUC

	$_{0\text{-inf}}$, area under the concentration-time curve up to infinite time; hERG, human Ether-a-gogo related gene.

REFERENCES

[1]. Wu W, et al. Optimization and SAR research at the benzoxazole and tetrazole rings of JNJ4796 as new anti-influenza A virus agents, part 2. Eur J Med Chem. 2023 Jan 5;245(Pt 1):114906.

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