Neuraminidase-IN-10

Cat. No.: HY-151103

CAS No.: 2685786-29-0

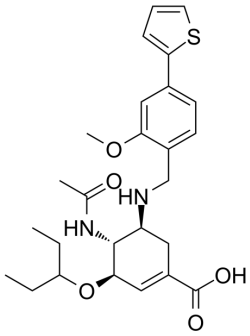
Molecular Formula: $C_{26}H_{34}N_2O_5S$

Molecular Weight: 486.62

Target: Influenza Virus

Pathway: Anti-infection

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



BIOLOGICAL ACTIVITY

Description

Neuraminidase-IN-10 is a potent neuraminidase (NA) inhibitor with anti-influenza activity. Neuraminidase-IN-10 is against H1N1, H5N1, and H5N8 with IC_{50} values of 2.6 nM, 5.1 nM, and 1.65 nM, respectively[1].

In Vitro

Neuraminidase-IN-10 displays promising anti-influenza virus activity with EC_{50} value of 7.28 and 0.71μM for H5N1 and H5N8, respectively in CEFs. Neuraminidase-IN-10 displays anti-influenza virus activity with EC_{50} values of 0.04 ± 0.04 and 28.70 ± 1.61 μM, respectively in MDCK Cells[1].

Metabolic stability is an important indicator for the assessment of drug candidates. Neuraminidase-IN-10 exhibits a $T_{1/2}$ (min), $CL_{int(mic)}$ (μL/min/kg), $CL_{int\ (liver)}$ (mL/min/kg) and remaining (T=60 min)(%) values of 120.5 min, 11.5 μL/min/kg, 10.4 mL/min/kg and 73.8 mins, respectively[1].

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

In Vivo

Neuraminidase-IN-10 (0.156 mM-10 mM; injected into the eggs) showed good protection against both H5N1 and H5N8 strains in a dose-dependent manner in a chicken embryonated egg model [1].

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

Animal Model:	SPF Chicken Embryonated Egg[1]
Dosage:	0.156 mM; 0.625 mM; 2.5 mM; 10 mM
Administration:	Injected into the egg
Result:	were not as effective as OSC in this infection model, but also exhibited a certain therapeutic effect. The survival rates of Neuraminidase-IN-10 (H5N1: 100 and 40%, respectively; H5N8: 100 and 100%, respectively) at 2.5 mM and 10 mM[1].

REFERENCES

[1]. Han Ju, et al. Iterative Optimization and Structure-Activity Relationship Studies of Oseltamivir Amino Derivatives as Potent and Selective Neuraminidase Inhibitors via Targeting 150-Cavity. J Med Chem. 2022 Aug 8. doi: 10.1021/acs.jmedchem.1c01970.

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

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