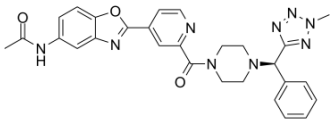
JNJ4796

Cat. No.:	HY-122907
CAS No.:	2241664-16-2
Molecular Formula:	$C_{28}H_{27}N_9O_3$
Molecular Weight:	537.57
Target:	Influenza Virus
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	JNJ4796 is an oral active fusion inhibitor of **influenza virus**, neutralizing influenza A group 1 viruses by inhibiting **hemagglutinin (HA)**-mediated fusion. JNJ4796 mimics the functionality of the broadly neutralizing antibodies (bnAbs)[1].
IC_{50} & Target	EC50: 12 nM (H1/Bris), 66 nM (H1/Cal), 38 nM (H1/NCa), 22 nM (H1/PR8), 13 nM (H1/SI06), 449 nM (H5/H97), 3.24 μM (H5/Viet)[1]. Hemagglutinin[1].
In Vitro	Like bnAb CR6261, the mechanism of action of JNJ4796 is demonstrated to be based on inhibition of the pH-sensitive conformational change of HA that triggers fusion of the viral and endosomal membranes and release of the viral genome into the host cell[1].
In Vivo	Oral administration of JNJ4796 protects mice from lethal challenge of 25 times the median lethal dose (LD_{50}) of H1N1 A/Puerto Rico/8/1934 virus. Doses of 50 and 10 mg/kg of JNJ4796 twice daily, initiated one day before challenge and continuing for 7 days, results in 100% survival at day 21 in comparison to the less potent compound JNJ8897 for which less than 50% survival is achieved[1]. Oral doses of JNJ4796 results in dose-dependent efficacy after a sublethal viral challenge (LD_{90}), with twice daily administration of 15 and 5 mg/kg of JNJ4796 giving rise to 100% survival[1].

Animal Model:	Female BALB/cAnNCrl mice intranasally infected with 2 × 25 μL of 25 × LD_{50} or 1 × LD_{90} of H1N1 A/Puerto Rico/8/34 dissolved in sterile phosphate buffered saline (D-PBS)[1]
Dosage:	50 and 10 mg/kg.
Administration:	Oral twice daily for 7 days.
Result:	Resulted in 100% survival at day 21 in comparison to the less potent compound JNJ8897.

REFERENCES

[1]. van Dongen MJP, et al. A small-molecule fusion inhibitor of influenza virus is orally active in mice. Science. 2019 Mar 8;363(6431).

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