Product Data Sheet

Product Name: VP-14637
Cat. No.: GC11893

Chemical Properties

Cas. No.	235106-62-4		
Chemical Name	2,2'-[(4-hydroxyphenyl)methylene]*bis*[4-[[(5-methyl-1H-tetrazol-1-yl)imino]methyl]-phenol		
SMILES	OC1=CC=C(C(C2=CC(/C=N/N3C(C)=NN=N3)=CC=C2O)C4=CC(/C=N\N5N=NN=C5C)=CC=C4O)C=C1		
Formula	$C_{25}H_{22}N_{10}O_3$	M.Wt	510.5
Solubility	≤10mg/ml in ethanol;10mg/ml in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	VP-14637		

Background

EC50: 5.4 nM for RSV fusion

VP-14637 is an inhibitor of RSV.

Respiratory syncytial virus (RSV) is the leading cause of respiratory tract infections in humans. RSV F protein that mediates fusion of the viral envelope with the host cell membrane has become a target of anti-RSV treatment.

In vitro: Previous study demonstrated that VP-14637 did not block RSV adsorption but inhibited RSV-induced cell-cell fusion and specifically bound to RSV-infected cells. VP-14637 was capable of specifically interacting with the RSV fusion protein. RSV variants resistant to VP-14637 were selected, in which no mutations arose in HR1, indicating a mechanism other than direct disruption of the heptad repeat interaction. The F proteins containing the resistance mutations exhibited greatly reduced binding of VP-14637 [1].

In vivo: In cotton rats, animals given as little as 126 microg/kg of VP-14637 by small droplet aerosol starting 1 day after experimental virus infection with either a RSV A or B subtype consistently had significantly lower mean pulmonary RSV titers and reduced histopathological findings than mock-treated animals or cotton rats given placebo. In addition, no cotton rat treated with VP14637 had any evident untoward responses [2].

Clinical trial: So far, no clinical study has been conducted.

References:
[1] Douglas, J. L.,Panis, M.L.,Ho, E., et al. Inhibition of respiratory syncytial virus fusion by the small molecule VP-14637 via specific interactions with F protein. Journal of Virology 77(9), 5054-5064 (2003).
[2] Wyde PR, Laquerre S, Chetty SN, Gilbert BE, Nitz TJ, Pevear DC. Antiviral efficacy of VP14637 against respiratory syncytial virus in vitro and in cotton rats following delivery by small droplet aerosol. Antiviral Res. 2005 Oct;68(1):18-26.

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