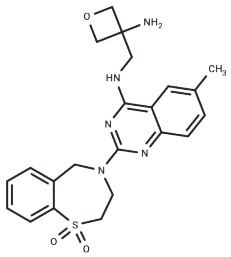
Data Sheet (Cat.No.T13401)

TargetMol

Ziresovir

Chemical Properties



CAS No. : 1422500-60-4

Formula: C22H25N5O3S

Molecular Weight: 439.53

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Ziresovir (RO-0529/AK0529) belongs to small molecule inhibitors and is a respiratory syncytial virus (RSV) fusion protein (F protein) inhibitor (EC50 = 3 nM) with oral activity and selectivity. This compound is used in research on respiratory syncytial virus infection, significantly alleviating bronchitis symptoms and reducing viral load.
Targets(IC50)	RSV
In vitro	**Methods**: In HEp-2 cells, Ziresovir (0.003-0.004 μM) was administered for 5 days, and cytopathic effect assay was used for detection. **Results**: The EC50 of Ziresovir against RSV Long, A2, B18537 laboratory strains and clinical isolates was 0.002-0.004 μM.[1] **Methods**: In HEp-2 cells, Ziresovir (0.03-3 nM) was co-incubated with RSV-Luc for 48 hours, and antiviral activity was determined by luciferase activity assay. **Results**: Ziresovir inhibited viral replication in a concentration-dependent manner, with an IC50 of approximately 0.2 nM, and no cytotoxicity was observed.[2]
In vivo	**Methods**: In a female BALB/c mouse RSV infection model, Ziresovir was administered orally at doses of 12.5 mg/kg and 50 mg/kg twice daily for 4 consecutive days. **Results**: Viral titers were reduced by more than 1 log at the 12.5 mg/kg dose, and decreased to 1.9 log at the 50 mg/kg dose.[1]

Solubility Information

Solubility	DMSO: 38 mg/mL (86.46 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.55 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2752 mL	11.3758 mL	22.7516 mL
5 mM	0.455 mL	2.2752 mL	4.5503 mL
10 mM	0.2275 mL	1.1376 mL	2.2752 mL
50 mM	0.0455 mL	0.2275 mL	0.455 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Zheng, Xiufang et al. Discovery of Ziresovir as a Potent, Selective, and Orally Bioavailable Respiratory Syncytial Virus Fusion Protein Inhibitor. Journal of medicinal chemistry vol. 62,13 (2019): 6003-6014.
Gao, Yuzhen et al. Evaluation of Small Molecule Combinations against Respiratory Syncytial Virus In Vitro. Molecules (Basel, Switzerland) vol. 26,9 2607. 29 Apr. 2021.