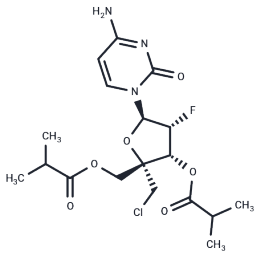
Data Sheet (Cat.No.TQ0034)

TargetMol

Lumicitabine

Chemical Properties



CAS No. : 1445385-02-3

Formula: C18H25ClFN3O6

Molecular Weight: 433.86

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	Lumicitabine (ALS-008176) is an RSV polymerase inhibitor.
Targets(IC50)	RSV
In vivo	In an adult human challenge study, Lumicitabine has shown efficacy against RSV infection[1]. Lumicitabine solubility is adequate to support oral administration in solutions with a relatively low percentage of organic solvent and in aqueous suspensions. High levels of NMP and NTP are obtained following the oral administration of Lumicitabine to monkeys [2].
Animal Research	Rats: Lumicitabine is formulated as solutions in PEG400-based vehicles. Pharmacokinetic studies are conducted at 5 mg/kg and for oral PK studies, the prodrugs are administered at 5 mg/kg parent nucleoside equivalent doses. Blood samples are typically collected at various time points up to 24 h post dose for rat [2]. Monkeys: Lumicitabine is formulated as a solution in PEG400-based vehicles. Pharmacokinetic studies are conducted at 5 mg/kg and for oral PK studies, the prodrugs are administered at 5 mg/kg parent nucleoside equivalent doses. Blood samples are typically collected at various time points up to 12 h post dose for Monkeys [2].

Solubility Information

Solubility	DMSO: 48 mg/mL (110.63 mM),Sonication is 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 (4.61 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	2.3049 mL	11.5245 mL	23.0489 mL
5 mM	0.461 mL	2.3049 mL	4.6098 mL
10 mM	0.2305 mL	1.1524 mL	2.3049 mL
50 mM	0.0461 mL	0.2305 mL	0.461 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

DeVincenzo JP, et al. Activity of Oral ALS-008176 in a Respiratory Syncytial Virus Challenge Study. N Engl J Med. 2015 Nov 19;373(21):2048-58.

Wang G, et al. Discovery of 4'-chloromethyl-2'-deoxy-3',5'-di-O-isobutyryl-2'-fluorocytidine (ALS-8176), a first-in-class RSV polymerase inhibitor for treatment of human respiratory syncytial virus infection. J Med Chem. 2015 Feb 26;58(4):1862-78.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481