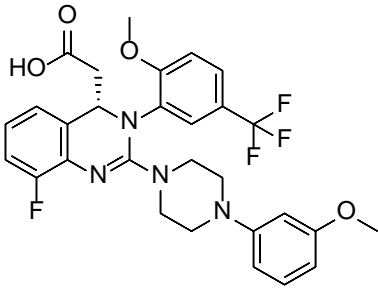# Product data sheet

MedKoo Cat#: 319765
Name: Letermovir
CAS: 917389-32-3
Chemical Formula: $C_{29}H_{28}F_4N_4O_4$
Exact Mass: 572.2047
Molecular Weight: 572.5606

Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Letermovir, also known as MK-8828 and AIC-246, is an antiviral drug that is being developed for the treatment of cytomegalovirus (CVM) infections. Letermovir has been tested in CMV infected patients with allogeneic stem cell transplants and may also be useful for other patients with a compromised immune system such as those with organ transplants or HIV infections.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	20.0	34.93
DMSO	73.33	128.08
Ethanol	60.0	104.79
Ethanol:PBS (pH 7.2) (1:1)	0.5	0.87

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.75 mL	8.73 mL	17.47 mL
5 mM	0.35 mL	1.75 mL	3.49 mL
10 mM	0.17 mL	0.87 mL	1.75 mL
50 mM	0.04 mL	0.17 mL	0.35 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Goldner T, Hempel C, Ruebsamen-Schaeff H, Zimmermann H, Lischka P. Geno- and phenotypic characterization of human cytomegalovirus mutants selected in vitro after letermovir (AIC246) exposure. Antimicrob Agents Chemother. 2014;58(1):610-3. doi: 10.1128/AAC.01794-13. Epub 2013 Nov 4. PMID: 24189264; PMCID: PMC3910730.
2. Marschall M, Stamminger T, Urban A, Wildum S, Ruebsamen-Schaeff H, Zimmermann H, Lischka P. In vitro evaluation of the activities of the novel anticytomegalovirus compound AIC246 (letermovir) against herpesviruses and other human pathogenic viruses. Antimicrob Agents Chemother. 2012 Feb;56(2):1135-7. doi: 10.1128/AAC.05908-11. Epub 2011 Nov 21. PMID: 22106211; PMCID: PMC3264222.

In vivo study

1. Lischka P, Hewlett G, Wunberg T, Baumeister J, Paulsen D, Goldner T, Ruebsamen-Schaeff H, Zimmermann H. In vitro and in vivo activities of the novel anticytomegalovirus compound AIC246. Antimicrob Agents Chemother. 2010 Mar;54(3):1290-7. doi: 10.1128/AAC.01596-09. Epub 2010 Jan 4. PMID: 20047911; PMCID: PMC2826024.

Product data sheet

7. Bioactivity

Biological target:

Letermovir (AIC246) is a potent inhibitor of CMV.

In vitro activity

AIC246 (letermovir) is a potent anticytomegalovirus drug in clinical development. This study reports a consistent antiviral efficacy of AIC246 against human cytomegalovirus laboratory strains, clinical isolates, and virus variants resistant to approved drugs.

Reference: Antimicrob Agents Chemother. 2012 Feb;56(2):1135-7. https://pubmed.ncbi.nlm.nih.gov/22106211/

In vivo activity

This study demonstrates that AIC246 exhibits excellent in vitro inhibitory activity against HCMV laboratory strains and clinical isolates, retains activity against ganciclovir-resistant viruses, is well tolerated in different cell types (median selectivity index, 18,000), and exerts a potent in vivo efficacy in a mouse xenograft model.

Reference: Antimicrob Agents Chemother. 2010 Mar;54(3):1290-7. https://pubmed.ncbi.nlm.nih.gov/20047911/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.