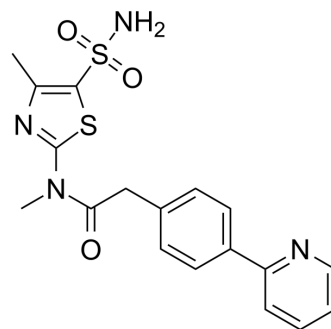


## Pritelivir

<b>Cat. No.:</b>	HY-15303		
<b>CAS No.:</b>	348086-71-5		
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>18</sub> N <sub>4</sub> O <sub>3</sub> S <sub>2</sub>		
<b>Molecular Weight:</b>	402.49		
<b>Target:</b>	HSV		
<b>Pathway:</b>	Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 33 mg/mL (81.99 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4845 mL	12.4227 mL	24.8453 mL
	5 mM	0.4969 mL	2.4845 mL	4.9691 mL
	10 mM	0.2485 mL	1.2423 mL	2.4845 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (6.21 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (6.21 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (6.21 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Pritelivir (AIC316), an inhibitor of the viral helicase-primase complex, exhibits antiviral activity in vitro and in animal models of herpes simplex virus (HSV) infection. Pritelivir is active against herpes simplex virus types 1 and 2 (HSV-1 and HSV-2) with the IC<sub>50</sub> of 0.02 μM against HSV1-2<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

HSV-1	HSV-2
0.02 μM (IC <sub>50</sub> )	0.02 μM (IC <sub>50</sub> )

## In Vivo

Pritelivir is the first in a class of antiviral agents that inhibit HSV replication by targeting the viral helicase-primase enzyme complex<sup>[2]</sup>.

Pritelivir (0.03-45 mg/kg) significantly increases survival. Pritelivir (0.3-30 mg/kg) reduces mortality against HSV-1, E-377.

Pritelivir has potent and resistance-breaking antiviral efficacy with potential for the treatment of potentially life-threatening HSV type 1 and 2 infections, including herpes simplex encephalitis<sup>[3]</sup>.

Combination therapies of Pritelivir at 0.1 or 0.3 mg/kg/dose with Acyclovir (10 mg/kg/dose) are protective when compared to the vehicle treated group against HSV-2, strain MS<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female BALB/c mice <sup>[3]</sup>
Dosage:	0.03 to 45 mg/kg
Administration:	Administered orally, twice daily at approximately 12 h intervals, for 7 days
Result:	Survival was significantly increased to 80-100% as compared to the vehicle treatment. Even the lowest dose of 0.3 mg/kg was effective in increasing survival to 53%.

## CUSTOMER VALIDATION

- J Antimicrob Chemother. 2022 Sep 5;dkac297.
- Antivir Res. 2020 Nov;183:104931.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Ligat G, et al. Identification of Amino Acids Essential for Viral Replication in the HCMV Helicase-PrimaseComplex. Front Microbiol. 2018 Oct 23;9:2483.

[2]. Wald A, et al. Helicase-primase inhibitor Pritelivir for HSV-2 infection. N Engl J Med. 2014 Jan 16;370(3):201-10.

[3]. Quenelle DC, et al. Efficacy of pritelivir and acyclovir in the treatment of herpes simplex virus infections in a mouse model of herpes simplex encephalitis. Antiviral Res. 2018 Jan;149:1-6.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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