Pritelivir mesylate

Cat. No.: HY-15303A

CAS No.: 1428333-96-3

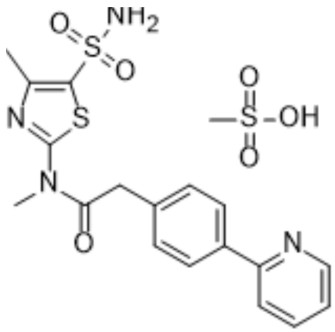
Molecular Formula: $C_{19}H_{22}N_4O_6S_3$

Molecular Weight: 498.6

Target: HSV

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 83.33 mg/mL (167.13 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0056 mL	10.0281 mL	20.0562 mL
	5 mM	0.4011 mL	2.0056 mL	4.0112 mL
	10 mM	0.2006 mL	1.0028 mL	2.0056 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.17 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.17 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.17 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pritelivir mesylate (BAY 57-1293 mesylate), an inhibitor of the viral helicase-primase complex, exhibits antiviral activity in vitro and in animal models of herpes simplex virus (HSV) infection. Pritelivir mesylate is active against herpes simplex virus types 1 and 2 (HSV-1 and HSV-2) with the IC_{50} of 0.02 μM against HSV1-2[1].

IC_{50} & Target

HSV-1	HSV-2
0.02 μM (IC_{50})	0.02 μM (IC_{50})

In Vivo

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

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[3].
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[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female BALB/c mice[3]
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.

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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.

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