# ABT-072

**Cat. No.:** HY-101634

**CAS No.:** 1132936-00-5

**Molecular Formula:** $C_{24}H_{27}N_3O_5S$

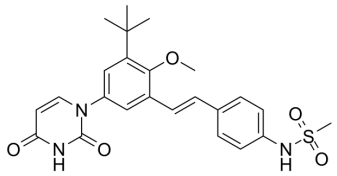
**Molecular Weight:** 469.55

**Target:** HCV

**Pathway:** Anti-infection

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 80 mg/mL (170.38 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.1297 mL | 10.6485 mL | 21.2970 mL |
| | 5 mM | 0.4259 mL | 2.1297 mL | 4.2594 mL |
| | 10 mM | 0.2130 mL | 1.0648 mL | 2.1297 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: ≥ 4 mg/mL (8.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 4 mg/mL (8.52 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 4 mg/mL (8.52 mM); Suspended solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

ABT-072 is an orally active and potent non-nucleoside HCV NS5B polymerase inhibitor (HCV GT1a $EC_{50}$=1 nM; HCV GT1b $EC_{50}$ =0.3 nM)[1][2][3].

**$IC_{50}$ & Target**

NS5B polymerase[1]

**In Vitro**

ABT-072 is a non-nucleoside NS5B polymerase inhibitor with nanomolar potency in vitro against genotype 1a and 1b hepatitis C virus polymerases[1].

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

**In Vivo**

ABT-072 (5 and/or 30 mg/kg; i.v. or p.o.) shows good PK properties[3].
ABT-072 (2.5 and/or 30 mg/kg; i.v. or p.o.) shows low plasma clearance and high oral bioavailability[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Rats[3] |
| Dosage: | 5 and/or 30 mg/kg (Pharmacokinetic Analysis) |
| Administration: | I.v. or p.o. |
| Result: | Showed good PK properties. |

| | |
|---|---|
| Animal Model: | Dog[3] |
| Dosage: | 2.5 or 30 mg/kg (Pharmacokinetic Analysis) |
| Administration: | I.v. or p.o. |
| Result: | Showed low plasma clearance and high oral bioavailability. |

## REFERENCES

[1]. Lawitz E, et al. A phase 2a trial of 12-week interferon-free therapy with two direct-acting antivirals (ABT-450/r, ABT-072) and ribavirin in IL28B C/C patients with chronic hepatitis C genotype 1. J Hepatol. 2013;59(1):18-23.

[2]. Shi Y, et al. Assessing Supersaturation and Its Impact on In Vivo Bioavailability of a Low-Solubility Compound ABT-072 With a Dual pH, Two-Phase Dissolution Method. J Pharm Sci. 2016;105(9):2886-2895.



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