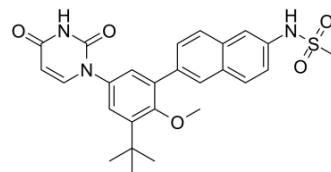


Dasabuvir

Cat. No.:	HY-13998		
CAS No.:	1132935-63-7		
Molecular Formula:	C ₂₆ H ₂₇ N ₃ O ₅ S		
Molecular Weight:	493.57		
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 : ≥ 46 mg/mL (93.20 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.0261 mL	10.1303 mL	20.2606 mL
	5 mM	0.4052 mL	2.0261 mL	4.0521 mL
	10 mM	0.2026 mL	1.0130 mL	2.0261 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 (5.07 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (5.07 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (5.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dasabuvir (ABT-333) is a nonnucleoside inhibitor of the RNA-dependent RNA polymerase encoded by the HCV NS5B gene, inhibits recombinant NS5B polymerases derived from HCV genotype 1a and 1b clinical isolates, with IC₅₀ between 2.2 and 10.7 nM.

IC₅₀ & Target

IC₅₀: 2.2-10.7 nM (NS5B polymerase)^[1]

In Vitro

Dasabuvir (ABT-333) is at least 7,000-fold selective for the inhibition of HCV genotype 1 polymerases over human/mammalian polymerases. Dasabuvir (ABT-333) inhibits the polymerase enzymatic activity of genotype 1 laboratory strain enzymes (H77, BK, N, and Con1 strains), as well as enzymes produced from polymerase genes from HCV genotype 1-infected subjects, with IC_{50} s between 2.2 and 10.7 nM. Dasabuvir (ABT-333) inhibits replication of HCV subgenomic replicons in cell culture assays, with EC_{50} values of 7.7 and 1.8 nM against genotype 1a (H77) and 1b (Con1), respectively. In the presence of 40% human plasma, there is a 12- to 13-fold decrease in inhibitory potency, yielding EC_{50} s of 99 and 21 nM for HCV genotype 1a (H77) and 1b (Con1) replicons, respectively^[1].

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

CUSTOMER VALIDATION

- Proc Natl Acad Sci U S A. 2017 Feb 21;114(8):1922-1927.
- Antimicrob Agents Chemother. 2019 May 24;63(6). pii: e00003-19.
- Antiviral Res. 2019 Oct;170:104570.
- Antiviral Res. 2017 Mar;139:18-24.
- Sci Rep. 2020 Feb 26;10(1):3521.

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REFERENCES

[1]. Kati W, et al. In vitro activity and resistance profile of dasabuvir, a nonnucleoside hepatitis C virus polymerase inhibitor. Antimicrob Agents Chemother. 2015 Mar;59(3):1505-11.

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

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