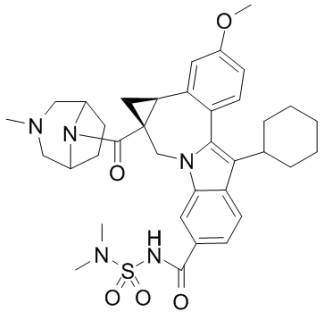
Beclabuvir

Cat. No.:	HY-12429
CAS No.:	958002-33-0
Molecular Formula:	$C_{36}H_{45}N_5O_5S$
Molecular Weight:	659.84
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 : ≥ 30 mg/mL (45.47 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5155 mL	7.5776 mL	15.1552 mL
5 mM	0.3031 mL	1.5155 mL	3.0310 mL
10 mM	0.1516 mL	0.7578 mL	1.5155 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: ≥ 2.5 mg/mL (3.79 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.79 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.79 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Beclabuvir is an allosteric inhibitor that binds to thumb site 1 of the hepatitis C virus (HCV) NS5B RNA-dependent RNA polymerase, and inhibits recombinant NS5B proteins from HCV genotypes 1, 3, 4, and 5 with IC_{50} of < 28 nM.

IC_{50} & Target

IC50: < 28 nM (NS5B protein)

In Vitro

Beclabuvir demonstrates additive or synergistic antiviral activity with pegIFN/RBV and in 2- or 3-drug combinations with a

	range of DAAs, such as HCV NS3 protease inhibitors, NS5A inhibitors' and/or nucleoside NS5B inhibitors[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The combination of beclabuvir with asunaprevir and daclatasvir achieves very high rates of viral eradication (about 90%) in patients infected with HCV genotype 1, which is the most common genotype worldwide[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Gastroenterol. 2019 May;54(5):449-458.
- Commun Biol. 2021 Jan 20;4(1):93.
- J Hum Genet. 2020 Jan;65(2):143-153.

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REFERENCES

[1]. Gentile I, et al. Beclabuvir for the treatment of hepatitis C. Expert Opin Investig Drugs. 2015;24(8):1111-21

[2]. Tatum H, et al. A randomized, placebo-controlled study of the NS5B inhibitor beclabuvir with peginterferon/ribavirin for HCV genotype 1. J Viral Hepat. 2015 Aug;22(8):658-64.

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