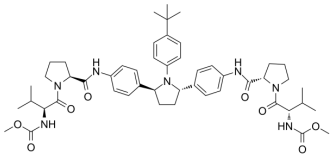
Ombitasvir

Cat. No.:	HY-13997
CAS No.:	1258226-87-7
Molecular Formula:	$C_{50}H_{67}N_7O_8$
Molecular Weight:	894.11
Target:	HCV
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 33 mg/mL (36.91 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.1184 mL	5.5922 mL	11.1843 mL
5 mM	0.2237 mL	1.1184 mL	2.2369 mL
10 mM	0.1118 mL	0.5592 mL	1.1184 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 (2.80 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ombitasvir is a potent inhibitor of the hepatitis C virus protein NS5A, with EC_{50}s of 0.82 to 19.3 pM against HCV genotypes 1 to 5, and 366 pM against genotype 6a.

IC_{50} & Target

EC50: 0.82 to 19.3 pM (HCV genotypes 1 to 5), 366 pM (HCV genotype 6a)[1]

In Vitro

Ombitasvir is active against the genotype 2a JFH-1 replicon, with an EC_{50} of 0.82 pM, and the EC_{50}s of ombitasvir are 42 pM and 68 pM against the L28 and F28 variants of this genotype 6a replicon, respectively[1]. In GT1a, variants M28V, L31V, and H58D confers 58- to 243-fold resistance to Ombitasvir. Single variants M28T, Q30R, and Y93C/S confers 800- to 8965-fold resistance, while Y93H/N confers >40000-fold resistance to Ombitasvir[2].

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

CUSTOMER VALIDATION

- Antiviral Res. 2017 Mar;139:18-24.
- J Virol. 2018 Jan 2;92(2). pii: e01582-17.
- Xenobiotica. 2019 Aug;49(8):935-944.
- J Liq ChromaTogr R T. 2019: 1-9.
- University of Glasgow. 2024 Mar.

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REFERENCES

[1]. Krishnan P, et al. In vitro and in vivo antiviral activity and resistance profile of ombitasvir, an inhibitor of hepatitis C virus NS5A. Antimicrob Agents Chemother. 2015 Feb;59(2):979-87

[2]. DeGoey DA, et al. Discovery of ABT-267, a pan-genotypic inhibitor of HCV NS5A. J Med Chem. 2014 Mar 13;57(5):2047-57

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