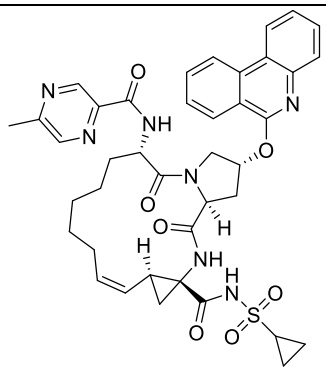
Product data sheet

MedKoo Cat#: 314255 Name: Paritaprevir CAS#: 1216941-48-8 Chemical Formula: $C_{40}H_{43}N_7O_7S$ Exact Mass: 765.29447 Molecular Weight: 765.88	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Paritaprevir, also known as ABT-450 or Veruprevir, is an acylsulfonamide inhibitor of the NS3-4A serine protease manufactured by Abbott Laboratories that shows promising results as a treatment of hepatitis C. When given in combination with ritonavir and ribavirin for 12 weeks, the rate of sustained virologic response at 24 weeks after treatment has been estimated to be 95% for those with hepatitis C virus genotype 1. Resistance to treatment with paritaprevir is uncommon, because it targets the binding site, but has been seen to arise due to mutations at positions 155 and 168 in NS3.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	30.0	39.2

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.31 mL	6.53 mL	13.06 mL
5 mM	0.26 mL	1.31 mL	2.61 mL
10 mM	0.13 mL	0.65 mL	1.31 mL
50 mM	0.03 mL	0.13 mL	0.26 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Pilot-Matias T, Tripathi R, Cohen D, Gaultier I, Dekhtyar T, Lu L, Reisch T, Irvin M, Hopkins T, Pithawalla R, Middleton T, Ng T, McDaniel K, Or YS, Menon R, Kempf D, Molla A, Collins C. In vitro and in vivo antiviral activity and resistance profile of the hepatitis C virus NS3/4A protease inhibitor ABT-450. Antimicrob Agents Chemother. 2015 Feb;59(2):988-97. doi: 10.1128/AAC.04227-14. Epub 2014 Dec 1. PMID: 25451053; PMCID: PMC4335891.

In vivo study

TBD

7. Bioactivity

Biological target:

Paritaprevir (ABT-450) is a potent non-structural protein 3/4A (NS3/4A) protease and SARS-CoV 3CLpro (IC50 of 1.31 μM.) inhibitor with EC50s of 1 and 0.21 nM against HCV 1a and 1b, respectively.

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In vitro activity

ABT-450 inhibited genotype 1a-H77 and 1b-Con1 HCV subgenomic replicons in cell culture with EC50s of 1.0 and 0.21 nM, respectively. In the presence of 40% human plasma, the EC50s increased by 17- to 24-fold (Table 1). The CC50 of ABT-450 was >37 μM, resulting in an in vitro selectivity index of ⩾37,000-fold. ABT-450 demonstrated activity across multiple HCV genotypes, with an EC50 of 5.3 nM against the genotype 2a JFH-1 subgenomic replicon and EC50s of 19, 0.09, and 0.69 nM against replicons containing NS3 protease from genotypes 3a, 4a, and 6a, respectively. As has been observed for other NS3/4A protease inhibitors such as simeprevir and asunaprevir, ABT-450 has reduced potency against genotype 3a, likely caused by the presence of the NS3 polymorphism D168Q, which is commonly found in this genotype.

Reference: Antimicrob Agents Chemother. 2015 Feb; 59(2): 988–997. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4335891/

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.