

**Product Name:** Asunaprevir

**Catalog No.:** 7755

**Batch No.:** 1

CAS Number: 630420-16-5

IUPAC Name: 1-[[*N-tert*-Butoxycarbonyl-*L-tert*-leucyl-*trans*-4-[(7-chloro-4-methoxyisoquinolin-1-yl)oxy]-*L*-prolyl]amino]-*N*-(cyclopropylsulfonyl)-(1*R*,2*S*)-2-vinylcyclopropane-1-carboxamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>35</sub>H<sub>46</sub>ClN<sub>5</sub>O<sub>9</sub>S.H<sub>2</sub>O

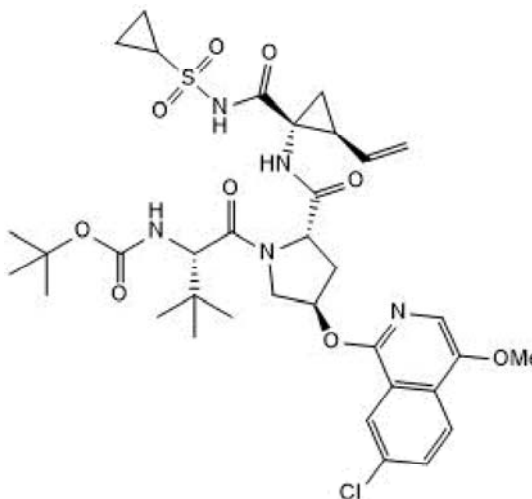
**Batch Molecular Weight:** 766.31

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM  
ethanol to 10 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.6% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	54.86	6.31	9.14
Found	54.55	6.38	9.06

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**Description:**

Asunaprevir is a potent HCV NS3 protease inhibitor (IC<sub>50</sub> = 0.2-3.5 nM). Asunaprevir can be used to control CRISPR-Cas9 gene editing via the small molecule-assisted shut-off (SMASh) technique, which involves fusion of Cas9 to a peptide comprising a protease domain and a degron tag. Asuprenavir blocks the protease-mediated removal of the degron tag leading to degradation of Cas9 through proteasome and autophagolysosome pathways. It can also be used as a reversible switch to control CAR (chimeric antigen receptor)-T cells, where the CAR has been modified by insertion of a hepatitis C virus nonstructural protein 3 protease (HCV-NS3) between the... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

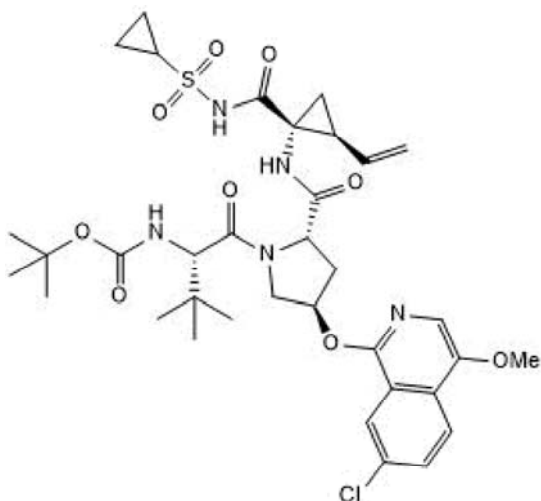
Batch Molecular Formula: C<sub>35</sub>H<sub>46</sub>ClN<sub>5</sub>O<sub>9</sub>S.H<sub>2</sub>O

Batch Molecular Weight: 766.31

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 10 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Cao et al** (2022) A reversible chemogenetic switch for chimeric antigen receptor T cells. *Angew.Chem.Int.Ed.Engl.* **61** e202109550. PMID: 34783141.

**Bafna et al** (2021) Hepatitis C virus drugs that inhibit SARS-CoV-2 papain-like protease synergize with remdesivir to suppress viral replication in cell culture. *Cell Rep.* **35** 109133. PMID: 33984267.

**Wu et al** (2020) A small molecule-controlled Cas9 repressible system. *Mol. Ther. Nucleic Acids* **19** 922. PMID: 32000033.

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