Asunaprevir

Catalog No.C10555 Batch:C1055503

Product Datasheet

Technical Data

Formula	$C_{35}H_{46}ClN_5O_9S$					
Molecular Weight	748.29	**CAS No.**	630420-16-5			
Solubility (25°C)*	In vitro	DMSO	100 mg/mL (133.63 mM)			
		Ethanol	100 mg/mL (133.63 mM)			
		Water	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.
				5%DMSO [1]→ 40%PEG300 [2]→ 5%Tween80 [3]→ 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	5.000mg/ml (6.68mM)	
		Injection		5% DMSO [1]→ 95% Corn oil Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	13.000mg/ml (17.37mM)	

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Biological Activity

Description	Asunaprevir is an orally bioavailable inhibitor of the **hepatitis C virus enzyme serine protease NS3** that is necessary for protein processing required for viral replication.
Targets	1b (J4L6S) [1]: 0.3 nM; 1a (H77) [1]: 0.7 nM; 6a (HK-6A) [1]: 0.9 nM; 4a (ED43) [1]: 1.6 nM; 5a (SA13) [1]: 1.7 nM; View More →
In vitro	Asunaprevir (ASV) competitively binds to the NS3/4A protease complex, with Ki values of 0.4 and 0.24 nM against recombinant enzymes representing genotypes 1a (H77) and 1b (J4L6S), respectively. This compound is high selective without any significant activity against the closely related GB virus-B NS3 protease and a panel of human serine or cysteine proteases. In cell culture, it inhibits replication of HCV replicons representing genotypes 1 and 4, with 50% effective concentrations (EC50s) ranging from 1 to 4 nM, and has weaker activity against genotypes 2 and 3 (EC50, 67-1162 nM). Selectivity is again demonstrated by the absence of activity (EC50, >12 μM) against a panel of other RNA viruses[1].
In vivo	Plasma and tissue exposures in vivo in several animal species indicate that this compound displays a hepatotropic disposition (liver-to-plasma ratios ranging from 40- to 359-fold across species). Twenty-four hours postdose, liver exposures across all species tested are ≥110-fold above the inhibitor EC50s observed with HCV genotype-1 replicons[1].

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  Huh 7.5.1 cells
- **Concentrations**
  1 or 10 nM
- **Incubation Time**
  3, 6, 24, and 48 h
- **Method**
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Animal Study:[1]

- **Animal Models**
  male FVB mice, Sprague-Dawley rats, male beagles, male cynomolgus monkeys
- **Dosages**
  5 mg/kg (mice); 3, 5, 10, and 15 mg/kg (rats); 3 or 6 mg/kg (Dogs); 3 mg/kg (Monkeys)
- **Administration**
  by oral gavage

References

https://pubmed.ncbi.nlm.nih.gov/22869577/ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5397474/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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