Beclabuvir

Cat. No.: HY-12429
CAS No.: 958002-33-0
Molecular Formula: C₃₆H₄₅N₅O₅S
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.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.5155 mL</td>
<td>7.5776 mL</td>
<td>15.1552 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3031 mL</td>
<td>1.5155 mL</td>
<td>3.0310 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1516 mL</td>
<td>0.7578 mL</td>
<td>1.5155 mL</td>
</tr>
</tbody>
</table>

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 IC₅₀ of < 28 nM.

IC₅₀ & 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
A range of DAAs, such as HCV NS3 protease inhibitors, NSSA inhibitors and/or nucleoside NS5B inhibitors\(^2\).

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

<table>
<thead>
<tr>
<th>In Vivo</th>
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</table>
| 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\(^1\).

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**REFERENCES**


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