### Trifluridine

**Cat. No.:** HY-A0061  
**CAS No.:** 70-00-8  
**Molecular Formula:** C₁₀H₁₁F₃N₂O₅  
**Molecular Weight:** 296.2  
**Target:** Thymidylate Synthase; HSV; Nucleoside Antimetabolite/Analog  
**Pathway:** Apoptosis; Anti-infection; Cell Cycle/DNA Damage  
**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: ≥ 100 mg/mL (337.61 mM)  
*“≥” means soluble, but saturation unknown.*

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>3.3761 mL</td>
<td>16.8805 mL</td>
<td>33.7610 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.6752 mL</td>
<td>3.3761 mL</td>
<td>6.7522 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3376 mL</td>
<td>1.6880 mL</td>
<td>3.3761 mL</td>
<td></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 (8.44 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (8.44 mM); Clear solution  
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (8.44 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description:** Trifluridine (Trifluorothymidine; 5-Trifluorothymidine; TFT) is an irreversible thymidylate synthase inhibitor, and thereby suppresses DNA synthesis. Trifluridine is an antiviral drug for herpes simplex virus (HSV) infection.

<table>
<thead>
<tr>
<th>IC₅₀ &amp; Target</th>
<th>Thymidylate Synthase</th>
<th>Nucleoside Antimetabolite/Analog</th>
<th>HSV-1</th>
<th>HSV-2</th>
</tr>
</thead>
</table>

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REFERENCES


[5]. Novel trifluridine crystal form and preparation method thereof. CN105198946A.