ABT-751

**Cat. No.:** HY-13270  
**CAS No.:** 141430-65-1  
**Molecular Formula:** C₁₈H₁₇N₃O₄S  
**Molecular Weight:** 371.41  
**Target:** Autophagy; Microtubule/Tubulin  
**Pathway:** Autophagy; Cell Cycle/DNA Damage; Cytoskeleton  
**Storage:**  
- Powder: -20°C 3 years, 4°C 2 years  
- In solvent: -80°C 2 years, -20°C 1 year

**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: 100 mg/mL (269.24 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.6924 mL</td>
<td>13.4622 mL</td>
<td>26.9244 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5385 mL</td>
<td>2.6924 mL</td>
<td>5.3849 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2692 mL</td>
<td>1.3462 mL</td>
<td>2.6924 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 (6.73 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (6.73 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**  
ABT-751 (E 7010) is a novel bioavailable tubulin-binding and antimitotic sulfonamide agent with IC50 of about 1.5 and 3.4 μM in neuroblastoma and non-neuroblastoma cell lines, respectively. IC50 Value: 1.5 μM (neuroblastoma); 3.4 μM (non-neuroblastoma)  
Target: Microtubule/Tubulin  
In vitro: ABT-751 shows the selective cytotoxicity with IC50 of 0.6–2.6 μM in neuroblastoma and 0.7–4.6 μM in other solid tumor cell lines. Furthermore, ABT-751 also exhibits a selective effect on dynamic microtubules and spares stable microtubules, accounting for the persistence of acetylated and detyrosinated α-tubulin positive polymerized tubules at the IC90 concentration of ABT-751.  
In vivo: In Calu-6 xenograft model, ABT-751 as a single agent at 100 and 75 mg/kg/day shows significant antitumor activity, while in combination with cisplatin, ABT-751 shows a dose-dependent enhancement in growth delay. In the HT-29 colon xenograft model, ABT-751 also shows significant antitumor activity as a single agent and produced a dose-dependent enhancement in growth delay in combination with 5-FU. In dogs with lymphoma, ABT-751 exhibits the dose-limiting toxicities that included vomiting, diarrhea, anorexia, or some
combination of these with a maximum tolerated dose (MTD) of 350 mg/m² PO q24h. Furthermore, the mean AUC and Cmax for ABT-751 at the MTD of 350 mg/m² is 5.55 μg-hour/mL and 0.9 μg/mL, respectively.

REFERENCES


[5]. Gaynon PS, Harned TM; for the Therapeutic Advances in Childhood Leukemia-Lymphoma (TACL) Consortium.