**Product Name:** Torin 1  
**Catalog No.:** 4247  
**Batch No.:** 4

**CAS Number:** 1222998-36-8  
**IUPAC Name:** 1-[4-{4-[1-Oxopropyl]-1-piperazinyl]-3-(trifluoromethyl)phenyl]-9-(3-quinolinyl)-benzo[h]-1,6-naphthyridin-2(1H)-one

### 1. PHYSICAL AND CHEMICAL PROPERTIES

- **Batch Molecular Formula:** $C_{35}H_{28}F_3N_5O_2\cdot\frac{1}{4}H_2O$
- **Batch Molecular Weight:** 612.12
- **Physical Appearance:** Pale pink solid
- **Solubility:** DMSO to 1 mM
- **Storage:** Store at +4°C
- **Batch Molecular Structure:**

![Molecular Structure](image)

### 2. ANALYTICAL DATA

- **HPLC:** Shows 98.9% purity
- **$^1$H NMR:** Consistent with structure
- **Mass Spectrum:** Consistent with structure
- **Microanalysis:**
  
<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>68.67</td>
<td>68.71</td>
</tr>
<tr>
<td>Hydrogen</td>
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<td>4.67</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>11.44</td>
<td>11.42</td>
</tr>
</tbody>
</table>

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Product Information

**Product Name:** Torin 1  
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**Description:** Potent and selective mTOR inhibitor (IC\textsubscript{50} = 2 - 10 nM for mTORC1 and mTORC2). Displays 200-fold selectivity for mTOR over DNA-PK, ATM and hVps34. Induces autophagy in HeLa cells.

**Physical and Chemical Properties:**
- **Batch Molecular Formula:** C\textsubscript{30}H\textsubscript{29}F\textsubscript{3}N\textsubscript{6}O\textsubscript{7} \cdot \textfrac{1}{4}H\textsubscript{2}O
- **Batch Molecular Weight:** 612.12
- **Physical Appearance:** Pale pink solid
- **Minimum Purity:** >98%

**Storage:** Store at +4°C

**Solubility & Usage Info:**
DMSO to 1 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:**
- Peterson et al (2011) mTOR complex 1 regulates lipin 1 localization to control the SREBP pathway. Cell. 146 408. PMID: 21816276.