1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{19}\text{H}_{16}\text{N}_{4}\text{O}_{3}\cdot\text{HCl}\cdot\frac{1}{4}\text{H}_{2}\text{O} \)

Batch Molecular Weight: 407.34

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM

Storage: Desiccate at +4°C

2. ANALYTICAL DATA

TLC: \( R_f = 0.4 \) (Dichloromethane:Methanol:Acetic acid [95/5/0.5])

HPLC: Shows 98.5% purity

\(^1\text{H} \text{NMR:} \) Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

<table>
<thead>
<tr>
<th></th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>56.02</td>
<td>56.06</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>4.82</td>
<td>4.57</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>13.75</td>
<td>14.06</td>
</tr>
</tbody>
</table>
**Product Information**

**Product Name:** PI 103 hydrochloride  
**Catalog No.:** 2930  
**Batch No.:** 3

**Description:**
Inhibitor of DNA-PK, PI 3-kinase (p110α) and mTOR (IC₅₀ values are 2, 8, 20, 26, 48, 83, 88, 150, 850, 920, ~ 1000 and 2300 nM for DNA-PK, p110α, mTORC1, PI 3-KC2β, p110δ, mTORC2, p110γ, ATR, ATM, PI 3-KC2α and hsVPS34 respectively). Inhibits growth of human tumor xenografts in mice in vivo. Induces autophagosome formation in glioma cells.

**Physical and Chemical Properties:**
- Batch Molecular Formula: C₁₃H₁₈N₄O₆.HCl.1¼H₂O
- Batch Molecular Weight: 407.34
- Physical Appearance: Off-white solid
- Minimum Purity: >98%

**Solubility & Usage Info:**
- DMSO to 100 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).

**References:**

**Storage:** Desiccate at +4°C

**Manufactured by:** Tocris Bioscience is an R&D Systems company

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