1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C_{24}H_{25}N_{5}O.2HCl.1\frac{1}{2}H_{2}O

Batch Molecular Weight: 499.43

Physical Appearance: Yellow solid

Solubility:
- water to 100 mM
- DMSO to 20 mM with gentle warming

Storage: Desiccate at RT

2. ANALYTICAL DATA

TLC: R_{f} = 0.68 (Chloroform:Methanol:Ammonia soln. [80:18:2])

HPLC: Shows 99.3% 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>57.72</td>
<td>57.8</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>6.05</td>
<td>6.24</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>14.02</td>
<td>14.06</td>
</tr>
</tbody>
</table>
Description:
Potent inhibitor of AMP-activated protein kinase (AMPK) (Kᵢ = 109 nM). Displays no significant activity on several structurally related kinases including ZAPK, SYK, PKCθ, PKA and JAK3. Inhibits AMPK activation induced by AICAR (Cat. No. 2840) and metformin (Cat. No. 2864). Also inhibits bone morphogenetic protein (BMP) type I receptors (ALK2, ALK3 and ALK6). Promotes cardiomyogenesis in mouse embryonic stem cells (ESCs) in vitro. Shown to induce autophagy in cancer cell lines via a mechanism independent of AMPK inhibition.

Physical and Chemical Properties:
Batch Molecular Formula: C₂₅H₂₅N₇O₂.HCl.1½H₂O
Batch Molecular Weight: 499.43
Physical Appearance: Yellow solid
Minimum Purity: >98%

Batch Molecular Structure:

Storage: Desiccate at RT

Solubility & Usage Info:
water to 100 mM
DMSO to 20 mM with gentle warming
CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival.

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: