Product Name: Nutlin-3
Catalog No.: 3984
Batch No.: 1
CAS Number: 548472-68-0
IUPAC Name: (±)-4-[4,5-Bis(4-chlorophenyl)-2-(2-isopropoxy-4-methoxy-phenyl)-4,5-dihydro-imidazole-1-carbonyl]-piperazin-2-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C_{30}H_{30}Cl_{2}N_{4}O_{4} \cdot \frac{1}{2}H_{2}O
Batch Molecular Weight: 590.5
Physical Appearance: White solid
Solubility: DMSO to 100 mM ethanol to 100 mM
Storage: Store at -20°C

2. ANALYTICAL DATA

TLC: R_f = 0.31 (Chloroform:Methanol [95:5])
HPLC: Shows 98.7% purity
^1H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

<table>
<thead>
<tr>
<th></th>
<th>Theoretical</th>
<th>Found</th>
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</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>61.02</td>
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<tr>
<td>Hydrogen</td>
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<td>5.11</td>
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<tr>
<td>Nitrogen</td>
<td>9.49</td>
<td>9.46</td>
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</tbody>
</table>
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IUPAC Name: \((\pm)-4-[4,5\text{-bis}(4\text{-chlorophenyl})-2\text{-isopropoxy}-4\text{-methoxy-phenyl})-4,5\text{-dihydro-imidazole-1-carbonyl}]\text{-piperazin-2-one}\)

**Description:**
MDM2 antagonist; inhibits the MDM2-p53 interaction (IC\(_{50}\) = 0.09 \(\mu\)M) and activates p53. Antiproliferative agent; induces apoptosis in cancer cells.

**Physical and Chemical Properties:**
- Batch Molecular Formula: C\(_{30}\)H\(_{30}\)Cl\(_2\)N\(_4\)O\(_4\)\(\frac{1}{2}\)H\(_2\)O
- Batch Molecular Weight: 590.5
- Physical Appearance: White solid

**Minimum Purity:** >98%

**Storage:** Store at -20°C

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

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:**