**KN-93**

**Cat. No.**: A3532  
**CAS No.**: 139298-40-1  
**Formula**: C26H29ClN2O4S  
**M.Wt**: 501.04  
**Synonyms**: KN 93; KN93  
**Target**: Others  
**Pathway**: CaM kinase II  
**Storage**: Store at -20°C

---

**Solvent & Solubility**

<table>
<thead>
<tr>
<th>Solvent &amp; Solubility</th>
<th>In Vitro</th>
</tr>
</thead>
<tbody>
<tr>
<td>solute</td>
<td>concentration</td>
</tr>
<tr>
<td>DMSO</td>
<td>1 mM</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
</tr>
</tbody>
</table>

Insoluble in H2O; ≥19.15 mg/mL in DMSO; ≥20.15 mg/mL in EtOH

---

**Preparing Stock Solutions**

Please refer to the solubility information to select the appropriate solvent.

---

**Biological Activity**

**Shortsummary**

CaMKII inhibitor, selective and competitive

**IC_{50} & Target**

370 nM (K_i) (CaMKII)

**Cell Viability Assay**

**Cell Line**: NIH 3T3 fibroblasts  
**Preparation method**: The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

**Reacting conditions**: ~24 μM; 70 hrs
Applications: 

KN-93 inhibited serum-induced fibroblast cell growth with an IC50 value of 8 μM, and induced apoptosis after prolonged G1 arrest at the concentration of 24 μM.

Animal experiment

<table>
<thead>
<tr>
<th>Animal models:</th>
<th>Parkinson's disease (PD) rats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage form:</td>
<td>1, 2 or 5 μg; intrastratal administration; b.i.d., for 21 days</td>
</tr>
<tr>
<td>Applications:</td>
<td>In PD rats, KN-93 (5 μg) ameliorated levodopa-induced dyskinesia through lowering the expression of pGluR1S845.</td>
</tr>
<tr>
<td>Other notes:</td>
<td>Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.</td>
</tr>
</tbody>
</table>

In Vivo

Animal experiment

<table>
<thead>
<tr>
<th>Animal models:</th>
<th>Parkinson's disease (PD) rats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage form:</td>
<td>1, 2 or 5 μg; intrastratal administration; b.i.d., for 21 days</td>
</tr>
<tr>
<td>Applications:</td>
<td>In PD rats, KN-93 (5 μg) ameliorated levodopa-induced dyskinesia through lowering the expression of pGluR1S845.</td>
</tr>
<tr>
<td>Other notes:</td>
<td>Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.</td>
</tr>
</tbody>
</table>


References


[2]. Tombes RM, Grant S, Westin EH, Krystal G: G1 cell cycle arrest and apoptosis are induced in NIH 3T3 cells by KN-93, an inhibitor of CaMK-II (the multifunctional Ca2+/CaM kinase). Cell Growth Differ 1995, 6(9):1063-1070.


Caution

FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.