**ID-8**

Cat. No.: B1952  
CAS No.: 147591-46-6  
Formula: C16H14N2O4  
M.Wt: 298.29  
Synonyms:  
Target: Others  
Pathway: Others  
Storage: Store at -20°C

### Solvent & Solubility

Insoluble in H2O; insoluble in EtOH; \( \geq 13.95 \text{ mg/mL} \) in DMSO

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.3524 mL</td>
<td>16.7622 mL</td>
<td>33.5244 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6705 mL</td>
<td>3.3524 mL</td>
<td>6.7049 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3352 mL</td>
<td>1.6762 mL</td>
<td>3.3524 mL</td>
<td></td>
</tr>
</tbody>
</table>

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

### Biological Activity

**Shortsummary**  
DYRK inhibitor

**IC\(_{50}\) & Target**

**Cell Viability Assay**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>D3ES embryonic stem cells (ESCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation method:</td>
<td>The solubility of this compound in DMSO is ( \geq 13.95 \text{ mg/mL} ). 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.</td>
</tr>
<tr>
<td>Reacting conditions:</td>
<td>10 μM; more than 1 month</td>
</tr>
</tbody>
</table>
Applications: In D3ES embryonic stem cells (ESCs) cultured in serum-free media, ID-8 enabled ESCs to proliferate in the undifferentiated state for at least 30 d. Cells maintained in the medium supplemented with ID-8 differentiated into various cell types, such as neurons, muscles, and liver. Removal of ID-8 from the long-term culture led to ESC differentiation. ID-8 reversibly maintained the long-term culture of ESCs by sustaining Nanog gene expression through Sox2-Oct3/4 activation.

In Vivo Animal experiment
Applications:

Product Citations

References

Caution
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NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.
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