K-7174 dihydrochloride

Cat. No.: HY-12743A
CAS No.: 191089-60-8
Molecular Formula: C₃₃H₅₀Cl₂N₂O₆
Molecular Weight: 641.67
Target: Others
Pathway: Others
Storage: Powder -20°C 3 years
        4°C  2 years
        In solvent -80°C 6 months
                 -20°C 1 month

SOLVENT & SOLUBILITY

In Vitro  H₂O : 15 mg/mL (23.38 mM; Need ultrasonic and warming)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent</th>
<th>Mass Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.5584 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3117 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1558 mL</td>
</tr>
<tr>
<td></td>
<td>1 mg</td>
<td>7.7922 mL</td>
</tr>
<tr>
<td></td>
<td>5 mg</td>
<td>1.5584 mL</td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
<td>0.7792 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description

K-7174 dihydrochloride is a novel cell adhesion inhibitor; inhibits the expression of vascular cell adhesion molecule-1 (VCAM-1) induced by either IL-1β or TNF-α. IC50 value: Target: GATA-specific inhibitor in vitro: K-7174 inhibited the expression of vascular cell adhesion molecule-1 (VCAM-1) induced by either tumor necrosis factor alpha or interleukin-1β, without affecting the induction of intercellular adhesion molecule-1 or E-selectin. K-7174 had no effect on the stability of VCAM-1 mRNA. K-7174 did not influence the binding to any of the following binding motifs: octamer binding protein, AP-1, SP-1, ets, NFκB, or interferon regulatory factor [1]. Addition of 10 microM K-7174 rescued these inhibitions of Epo protein production and promoter activity induced by IL-1β, TNF-alpha, or L-NMMA, respectively [2]. K-7174 had the potential to induce endoplasmic reticulum (ER) stress evidenced by induction of GRP78 and CHOP. Other inducers of ER stress completely reproduced the effects of K-7174 including suppression of lipid accumulation, blockade of induction of adiponectin and PPARgamma and maintenance of MCP-1 expression [3]. In vivo: K-7174, one of proteasome inhibitory homopiperazine derivatives, exhibits a therapeutic effect, which is stronger when administered orally than intravenously, without obvious side effects in a murine myeloma model. Moreover, K-7174 kills bortezomib-resistant myeloma cells carrying a β5-subunit mutation in vivo and primary cells from a patient resistant to bortezomib [4].
CUSTOMER VALIDATION

- **FASEB J.** 2020 Jan 27.
- **Department of Molecular Medicine and Biopharmaceutical Sciences.** 2020 May.
- **bioRxiv.** 2019 Sep.

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REFERENCES


