Acriflavine

Cat. No.: HY-100575
CAS No.: 8048-52-0
Molecular Formula: C₁₄H₁₄ClN₃
Molecular Weight: 259.73
Target: HIF/HIF Prolyl-Hydroxylase
Pathway: Metabolic Enzyme/Protease
Storage: 4°C, sealed storage, away from moisture and light
* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

SOLVENT & SOLUBILITY

In Vitro
H₂O : ≥ 25 mg/mL (96.25 mM)
* “≥” means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Concentration</td>
<td></td>
<td>3.8502 mL</td>
<td>19.2508 mL</td>
<td>38.5015 mL</td>
</tr>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.7700 mL</td>
<td>3.8502 mL</td>
<td>7.7003 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.3850 mL</td>
<td>1.9251 mL</td>
<td>3.8502 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

In Vivo
1. Add each solvent one by one: PBS
Solubility: 2 mg/mL (7.70 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description
Acriflavine is a fluorescent dye for labeling high molecular weight RNA. It is also a topical antiseptic.

In Vitro
Acriflavine is identified as a potent inhibitor of the MCT4 that can inhibit the binding between Basigin and MCT4. Acriflavine significantly inhibits growth and self-renewal potential of several glioblastoma neurosphere lines[1]. The HIF-1 inhibitor acriflavine decreases survival and growth of CML cells. It targets stem cell potential of CML cells[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo
Acriflavine treatment inhibits intratumoral expression of VEGF and tumor vascularization[1]. In a murine CML model, acriflavine decreases leukemia development and reduces LSC maintenance[2]. Acriflavine retards tumor growth in a murine model of breast cancer. The combination of sunitinib with acriflavine significantly decreases vascular endothelial growth factor and TGF-β expression and reduces tumor vasculature followed by increased intratumor necrosis and apoptosis[3].
PROTOCOL

Animal Administration

Mice: CML mice are treated daily with acriflavine (8 mg/kg) or PBS via intraperitoneal injection, for 10 days starting from day 7 after bone marrow transplantation[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

• EBioMedicine. 2018 May;31:202-216.
• J Clin Endocrinol Metab. 2022 Oct 3;dgac548.
• J Photochem Photobiol B. 2022 Sep;234:112537.

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REFERENCES

