Acetoacetic acid sodium salt

Cat. No.: HY-112540B
CAS No.: 623-58-5
Molecular Formula: C₄H₅NaO₃
Molecular Weight: 124.07
Target: Others
Pathway: Others
Storage: -20°C, stored under nitrogen
* The compound is unstable in solutions, freshly prepared is recommended.

**SOLVENT & SOLUBILITY**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>In Vitro</th>
<th>H₂O : 50 mg/mL (403.00 mM; Need ultrasonic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing Stock Solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentration</td>
<td>Mass 1 mg</td>
<td>Mass 5 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td>8.0600 mL</td>
<td>40.2998 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>1.6120 mL</td>
<td>8.0600 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.8060 mL</td>
<td>4.0300 mL</td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**
Acetoacetic acid sodium salt is a metabolite of non-esterified fatty acids, involved in the development of human diabetes. Acetoacetic acid sodium salt induces oxidative stress to inhibit the assembly of very low density lipoprotein in bovine hepatocytes[1].

**In Vitro**
Acetoacetic acid sodium salt induces oxidative stress to inhibit the assembly of very low density lipoprotein in bovine hepatocytes[1]. Acetoacetic acid (0.6, 2.4, 4.8 mM) increases malondialdehyde (MDA) content in high-dose group (GH) group, decreases mRNA expression of Mn SOD, Cu/Zn SOD, and glutathione peroxidase (GSH-Px) in all groups, lowers catalase (CAT) mRNA expression in medial-dose group (GM), and GH groups. In addition, Acetoacetic acid down-regulates the mRNA expression of apolipoprotein B100 (ApoB100), apolipoprotein E (ApoE), and low density lipoprotein receptor (LDLR). Thus, VLDL assembly is decreased and triglyceride (TG) accumulation is increased in these bovine hepatocytes[1].

**REFERENCES**

Caution: Product has not been fully validated for medical applications. For research use only.

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