**3-Bromopyruvic acid**

Cat. No.: HY-19992  
CAS No.: 1113-59-3  
Molecular Formula: C₃H₃BrO₃  
Molecular Weight: 166.96  
Target: Hexokinase  
Pathway: Metabolic Enzyme/Protease  
Storage: 
- Powder -20°C 3 years  
- 4°C 2 years  
- In solvent -80°C 6 months  
- -20°C 1 month  
Solubility: H₂O: ≥ 32 mg/mL  
*"<1 mg/mL" means slightly soluble or insoluble. "≥" means soluble, but saturation unknown.*  

**PREPARING STOCK SOLUTIONS**

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>5.9895 mL</td>
<td>29.9473 mL</td>
<td>59.8946 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>1.1979 mL</td>
<td>5.9895 mL</td>
<td>11.9789 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.5989 mL</td>
<td>2.9947 mL</td>
<td>5.9895 mL</td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**

3-Bromopyruvic acid is a hexokinase II inhibitor, is an effective antitumor agent on the hepatoma cells. Target: hexokinase II in vitro: 3-BrPA dissociates HK II from this complex, causing cell death, and thus, having an anti-tumor effect. In vitro treatment of cells with 3-BrPA significantly inhibited their growth, as evaluated by MTT assay and adenosine triphosphate-tumor chemosensitivity assay (ATP-TCA). [1] 3-Bromopyruvic acid (3-BP) is a glycolytic inhibitor and a promising anticancer compound, induces oxidative stress and depletes cells of glutathione (GSH). [2] In vivo: 3-BrPA treatment (50 mg/kg ip. daily, 6 days/week for three weeks) is effective in the animal model by attenuating tumor growth and causing tumor necrosis. Toxic signs were not observed. The acute toxicity study provided an LD₅₀ of 191.7 mg/kg for 3-BrPA. [1]

**REFERENCES**