3-Aminopropionitrile fumarate (2:1)

**Cat. No.:** HY-107829  
**CAS No.:** 2079-89-2  
**Molecular Formula:** C₄H₄O₄.C₃H₆N₂  
**Molecular Weight:** 256.26  
**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  
\[ \text{H}_2\text{O}: 125 \text{ mg/mL (487.79 mM; Need ultrasonic)} \]

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>3.9023 mL</td>
<td>19.5114 mL</td>
<td>39.0229 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.7805 mL</td>
<td>3.9023 mL</td>
<td>7.8046 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3902 mL</td>
<td>1.9511 mL</td>
<td>3.9023 mL</td>
<td></td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**  
3-Aminopropionitrile fumarate (2:1) is a lathyrogen which inhibits crosslinking of collagen.

**IC₅₀ & Target**  
Collagen[1].

**In Vivo**  
Twenty days after the induction of tendinitis, intraleosional treatment with 3-Aminopropionitrile fumarate (2:1) (BAPN-F) is performed and the contralateral limbs receive saline. A biopsy is obtained and gross and histopathological analysis is performed on the 150th day of the experiment. The collagen fibrillar alignment pattern in the healing area is better in the 3-Aminopropionitrile fumarate (2:1) group submitted to controlled exercise than in the other group, as observed by sonographic and histopathologic examination. The present results indicate that 3-Aminopropionitrile fumarate (2:1) in combination with controlled loading improved scar remodeling and tendon wound collagen maturation[1].
Animal Administration

Seven female and nine male horses are assigned at random to two groups (G1 and G2) submitted to different treatments after the induction of acute tendinitis. Each group consists of eight animals injected with type 1 collagenase, 1 mL, 2.5 mg/mL, in the middle metacarpal third into the superficial digital flexor tendons of both forelimbs. Twenty days after the injection of collagenase, one of the limbs (G1A/G2A) receives an injection of 3-Aminopropionitrile fumarate (2:1), 3 mL, 0.8 mg/mL, and the other limb (G1B) receives the same volume of buffered saline as control. Group one was left in box rest, and group two was submitted to controlled exercise during the experiment.

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

REFERENCES