**L-Ascorbic acid sodium salt**

**Cat. No.**: HY-B0166A  
**CAS No.**: 134-03-2  
**Molecular Formula**: C₆H₇NaO₆  
**Molecular Weight**: 198.11  
**Target**: Reactive Oxygen Species; Apoptosis  
**Pathway**: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis  
**Storage**: 4°C, protect from light  
* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

**SOLVENT & SOLUBILITY**

| In Vitro | H₂O : ≥ 41 mg/mL (206.96 mM)  
* “≥” means soluble, but saturation unknown. |

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>5.0477 mL</td>
<td>25.2385 mL</td>
<td>50.4770 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>1.0095 mL</td>
<td>5.0477 mL</td>
<td>10.0954 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.5048 mL</td>
<td>2.5239 mL</td>
<td>5.0477 mL</td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**  
L-Ascorbic acid sodium salt is a more bioavailable form of vitamin C that is an antioxidant agent.

**In Vitro**  
L-Ascorbic acid sodium salt, a known enhancer of collagen deposition, has also been identified as an inhibitor of elastogenesis[1]. The conditioned medium for B16F10 cells significantly inhibits cell apoptosis induced by sodium L-ascorbate (10 mM), and the effective ingredients in the medium show a relative molecular mass below 5,000[2].

**In Vivo**  
Tg rats treated with sodium L-ascorbate show a higher incidence of carcinoma (29.6%), compared to those without sodium L-ascorbate (15.4%). Independent of the sodium L-ascorbate treatment, transgenic rats exhibit various kinds of malignant tumors in various organs[3]. After 12 weeks of PEITC-treatment, both simple hyperplasia and papillary or nodular (PN) hyperplasia have developed in all animals, but the majority of these lesions have disappeared at week 48, irrespective of the sodium L-ascorbate-treatment. The same lesions after 24 weeks of PEITC-treatment have progressed to dysplasia and carcinoma, in a small number of cases by week 48, but enhancement by the sodium L-ascorbate-treatment is evident only with simple hyperplasias and PN hyperplasias in rats[4].
A total of 40 7-week-old male Tg rats are divided into 2 groups. Twenty-seven (group 1) and 13 (group 2) rats are given a powdered MF diet with or without 5% sodium L-ascorbate, respectively. Similarly, a total of 42 7-week-old male Non-tg rats are divided into 2 groups, and 30 (group 3) and 12 (group 4) animals are given a diet with or without 5% sodium L-ascorbate, respectively.

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

REFERENCES


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