Allicin

Cat. No.: HY-N0315
CAS No.: 539-86-6
Molecular Formula: C₆H₁₀OS₂
Molecular Weight: 162.27
Target: Bacterial; Antibiotic
Pathway: Anti-infection
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**
DMSO: 130 mg/mL (801.13 mM; Need ultrasonic)
Ethanol: 70 mg/mL (431.38 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>6.1626 mL</td>
<td>30.8128 mL</td>
<td>61.6257 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>1.2325 mL</td>
<td>6.1626 mL</td>
<td>12.3251 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.6163 mL</td>
<td>3.0813 mL</td>
<td>6.1626 mL</td>
</tr>
</tbody>
</table>

Preparation of Stock Solutions:
- Please refer to the solubility information to select the appropriate solvent.

**In Vivo**
1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.5 mg/mL (21.57 mM); Clear solution
2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.5 mg/mL (21.57 mM); Clear solution
3. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 3.5 mg/mL (21.57 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 3.25 mg/mL (20.03 mM); Suspended solution; Need ultrasonic
5. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.25 mg/mL (20.03 mM); Clear solution
6. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.25 mg/mL (20.03 mM); Clear solution

**BIOLOGICAL ACTIVITY**

Description: Allicin (diallyl thiosulfinate) is isolated from garlic including Diallyl monosulfide, Diallyl disulfide, Diallyl trisulfide, Diallyl...
tetrasulfide, and Methyl allyl disulphide etc. They accounts for 98% of the extract. Allicin (diallyl thiosulfinate) has highly potent antimicrobial activity, and inhibits growth of a variety of microorganisms, among them antibiotic-resistant strains[1][2].

| In Vitro | Allicin exhibits comparable MICs (32-64 μg/mL) toward methicillin-resistant S. aureus ATCC 43300, the type strain S. aureus DSM 20231, E. coli DSM 30083, A. baumannii DSM 30007, and C. albicans DSM 1386[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

REFERENCES


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

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