Ditiocarb sodium

Cat. No.: HY-B1637
CAS No.: 148-18-5
Molecular Formula: \( \text{C}_5\text{H}_{10}\text{NNaS}_2 \)
Molecular Weight: 171.26
Target: HIV
Pathway: Anti-infection
Storage:
- Powder: -20°C 3 years, 4°C 2 years, In solvent -80°C 6 months, -20°C 1 month

SOLVENT & SOLUBILITY

In Vitro
DMSO: \( \geq 300 \text{ mg/mL (1751.72 mM)} \)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>5.8391 mL</td>
<td>29.1954 mL</td>
<td>58.3908 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>1.1678 mL</td>
<td>5.8391 mL</td>
<td>11.6782 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.5839 mL</td>
<td>2.9195 mL</td>
<td>5.8391 mL</td>
</tr>
</tbody>
</table>

*“≥” means soluble, but saturation unknown.*

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

BIOLOGICAL ACTIVITY

Description
Ditiocarb sodium (Sodium diethyldithiocarbamate) is an accelerator of the rate of copper cementation. Sodium diethyldithiocarbamate reduces the incidence of HIV infection.

\( \text{IC}_{50} \) & Target
HIV\(^{[2]} \)

In Vitro
Ditiocarb sodium (Sodium diethyldithiocarbamate) reacts with the \( \text{Cu}^{2+} \) solution giving a complex of copper diethyldithiocarbamate, which enhances the rate of cementation\(^{[1]} \). Ditiocarb sodium is an agent with strong antioxidant capacity and chelating activities\(^{[2]} \).

In Vivo
Ditiocarb sodium (Sodium diethyldithiocarbamate) improves the depressed immune responses of newborn and aged mice. Sodium diethyldithiocarbamate prevents cisplatin nephrotoxicity in animals without reducing the antitumor activity. In that AIDS model, Ditiocarb sodium reduces lymphadenopathy and hypergammaglobulinemia, restores immunocompetence, and prolongs survival\(^{[2]} \).
REFERENCES
