**Product Information**

**Miltefosine**

**Item No. 63280**

<table>
<thead>
<tr>
<th>CAS Registry No.:</th>
<th>58066-85-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Name:</td>
<td>1-hexadecylphosphocholine</td>
</tr>
<tr>
<td>Synonym:</td>
<td>HePC</td>
</tr>
<tr>
<td>MF:</td>
<td>C₂₁H₄₆NO₄P</td>
</tr>
<tr>
<td>FW:</td>
<td>407.6</td>
</tr>
<tr>
<td>Purity:</td>
<td>≥98%</td>
</tr>
<tr>
<td>Stability:</td>
<td>≥1 year at -20°C</td>
</tr>
<tr>
<td>Supplied as:</td>
<td>A crystalline solid</td>
</tr>
</tbody>
</table>

**Laboratory Procedures**

For long term storage, we suggest that miltefosine be stored as supplied at -20°C. It should be stable for at least one year. Miltefosine is supplied as a crystalline solid. A stock solution may be made by dissolving the miltefosine in an organic solvent. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of miltefosine in these solvents is approximately 1.25 mg/ml, 800 and 50 µg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of miltefosine can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of miltefosine in PBS (pH 7.2) is approximately 2.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Miltefosine is an inhibitor of CTP:phosphocholine cytidylyl transferase and has antimitastatic properties.1-3 At concentrations of 3 and 25 µM, miltefosine inhibits proliferation of HaCaT cells (immortalized human keratinocyte cell line) by 50% and 94%, respectively.4 The mechanism of action of miltefosine is not well established, but the antiproliferative effect may be mediated by an increase in cellular ceramide which results in apoptosis. Treatment of cells with 25 µM miltefosine results in a 53% increase in ceramide concentration relative to control.4

Miltefosine is more than 90% effective in eradicating visceral infections of Leishmania species (*kala azar*), although the mechanism of this antiprotozoal activity is also poorly understood.5

**References**


**Related Products**

For a list of related products please visit: www.caymanchem.com/catalog/63280

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**WARNING:** This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

**SAFETY DATA**

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

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Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals herein. Cayman warrants only to the original customer that the material will meet our specifications in the state of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence. Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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