### Chemical Properties

<table>
<thead>
<tr>
<th><strong>Product Name:</strong></th>
<th>Elesclomol (STA-4783)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cas No.:</strong></td>
<td>488832-69-5</td>
</tr>
<tr>
<td><strong>M.Wt:</strong></td>
<td>400.5</td>
</tr>
<tr>
<td><strong>Formula:</strong></td>
<td>C19H20N4O2S2</td>
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<tr>
<td><strong>Synonyms:</strong></td>
<td>STA 4783, STA4783</td>
</tr>
<tr>
<td><strong>Chemical Name:</strong></td>
<td>1-N',3-N'-bis(benzenecarbonothioyl)-1-N',3-N'-dimethylpropanedihydrazide</td>
</tr>
<tr>
<td><strong>Canonical SMILES:</strong></td>
<td>CN(C(=S)C1=CC=CC=C1)NC(=O)CC(=O)NN(C)=C2=CC=CC=C2</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>≥20.15mg/mL in DMSO, ≥5.68 mg/mL in EtOH with ultrasonic and warming, &lt;2.5 mg/mL in H2O</td>
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<tr>
<td><strong>Storage:</strong></td>
<td>Store at -20°C</td>
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<tr>
<td><strong>General tips:</strong></td>
<td>For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.</td>
</tr>
<tr>
<td><strong>Shopping Condition:</strong></td>
<td>Evaluation sample solution: ship with blue ice</td>
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<tr>
<td></td>
<td>All other available size: ship with RT, or blue ice upon request</td>
</tr>
</tbody>
</table>

### Biological Activity

**Targets:** Proteases  
**Pathways:** HSP  
**Description:**

Elesclomol (also known as STA-4783), originally identified in a cell-based phenotypic screen for proapoptotic activity, is a novel small-molecule that potently induces apoptosis of cancer cells through the rapid generation of reactive oxygen species (ROS) and the induction of unmanageable levels of oxidative stress. Elesclomol exhibits autitumor activity against a broad spectrum of types of cancer cell in human tumor xenograft models due to its excessive ROS.
production and elevated levels of oxidative stress leading to the death of cancer cells. Elesclomol is currently being studies as a novel cancer therapeutic, in which it has demonstrated ability to prolong progression-free survival in study subjects.

Reference:

 Protocol

Cell experiment:

Cell lines HSB2 cells

Preparation method The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.

Reacting conditions 200 nM; 18 hrs

Applications In HSB2 cells, Elesclomol increased the number of early and late apoptotic cells (3.7- and 11-fold, respectively).

Animal experiment [3]:

Animal models Nude mouse xenograft models of human breast cancers (MDA435, MCF7 and ZR-75-1), lung cancer (RER) or lymphoma (U937)

Dosage form 25 ~ 100 mg/kg; i.v.

Applications In nude mouse xenograft models of human breast cancers (MDA435, MCF7 and ZR-75-1), lung cancer (RER) or lymphoma (U937), a single dose of Elesclomol (25 ~ 100 mg/kg) showed no antitumor activity. But Elesclomol substantially enhanced the efficacy of chemotherapeutic agents such as Paclitaxel, both in terms of tumor regression and extended survival of mice.

Other notes Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused
by an experimental system error and it is normal.

Reference:

Product Citations


Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology

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