alpha-Viniferin

Chemical Properties

- **CAS No.:** 62218-13-7
- **Formula:** C42H30O9
- **Molecular Weight:** 678.7
- **Appearance:** N/A
- **Storage:** 0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

- **Description:** Alpha-viniferin is a prostaglandin H2 synthase inhibitor, which has anti-inflammatory, anti-oxidant, anti-arthritis, and anti-tumor activities.
- **Targets (IC50):**
  - P450: None
  - NO Synthase: None
  - PGE: None
- **In vitro:** Alpha-Viniferin at 3 - 10 microM dose-dependently inhibited interferon (IFN)-gamma-induced Ser(727) phosphorylation of the signal transducer and activation of transcription-1 (STAT-1), a pivotal transcription factor controlling IFN-gamma-targeted genes, in RAW 264.7 macrophages, and also IFN-gamma-induced activation of the extracellular signal-regulated kinase (ERK)-1, a protein kinase upstream of the Ser(727) phosphorylation of STAT-1. However, alpha-Viniferin, only at a higher concentration of 10 microM, inhibited Janus kinase 2-mediated Tyr(701) phosphorylation of STAT-1 in the cells. To understand STAT-1-dependent inflammatory responses, we quantified nitric oxide (NO) or chemokines. alpha-Viniferin at 3 - 10 muM dose-dependently inhibited IFN-gamma-induced production of NO, IFN-gamma-inducible protein-10 (IP-10), or the monokine induced by IFN-gamma (MIG) in RAW 264.7 cells and also that of NO in primary macrophages-derived from C57BL/6 mice. Furthermore, alpha-Viniferin diminished IFN-gamma-induced protein levels of inducible NO synthase (iNOS), attenuated mRNA levels of iNOS, IP-10, or MIG as well as inhibited promoter activity of the iNOS gene.

Solubility Information

- **Solubility:** < 1 mg/ml refers to the product slightly soluble or insoluble

**Preparing Stock Solutions**

<table>
<thead>
<tr>
<th></th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
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</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.473 mL</td>
<td>7.367 mL</td>
<td>14.734 mL</td>
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<tr>
<td>5 mM</td>
<td>0.295 mL</td>
<td>1.473 mL</td>
<td>2.947 mL</td>
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<tr>
<td>10 mM</td>
<td>0.147 mL</td>
<td>0.737 mL</td>
<td>1.473 mL</td>
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<tr>
<td>50 mM</td>
<td>0.029 mL</td>
<td>0.147 mL</td>
<td>0.295 mL</td>
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</tbody>
</table>

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.
Reference