Bromoenol lactone

**Cat. No.:** HY-107411  
**CAS No.:** 88070-98-8  
**Molecular Formula:** C₁₆H₁₃BrO₂  
**Molecular Weight:** 317.18  
**Target:** Phospholipase  
**Pathway:** Metabolic Enzyme/Protease  
**Storage:**  
- Pure form: -20°C, 3 years  
- In solvent: -80°C, 6 months; -20°C, 1 month

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### SOLVENT & SOLUBILITY

#### In Vitro

DMSO: 250 mg/mL (788.20 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Solvent</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>DMSO</td>
<td>3.1528 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>DMSO</td>
<td>15.7639 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>DMSO</td>
<td>31.5278 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

- 1 mM: 3.1528 mL
- 5 mM: 15.7639 mL
- 10 mM: 31.5278 mL

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

#### In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 6.25 mg/mL (19.70 mM); Clear solution

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### BIOLOGICAL ACTIVITY

**Description**

Bromoenol lactone ((6E)-Bromoenol lactone) is a suicide-based irreversible, selective, potent inhibitor of calcium-independent phospholipase A₂ (iPLA₂β) with an IC₅₀ value of approximately 7 μM, which inhibits antigen-stimulated mast cell exocytosis without blocking Ca²⁺ influx[1][2].

**IC₅₀ & Target**

- PLA2
- 7 μM (IC₅₀)

**In Vitro**

In RBL 2H3 and bone marrow-derived mast cells (BMMCs), Ca²⁺ entry is critical for exocytosis. Bromoenol lactone inhibits exocytosis when stimulated using a Ca²⁺ ionophore A23187, which passively transports Ca²⁺ down a concentration gradient and also in permeabilised mast cells where Ca²⁺ entry is no longer relevant. Moreover, Bromoenol lactone has only a minor effect on antigen- or thapsigargin-stimulated Ca²⁺ signalling, both the release from internal stores and sustained elevation due to Ca²⁺ influx[1].
REFERENCES


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