**Resolvin D1**

**Cat. No.:** HY-125527  
**CAS No.:** 872993-05-0  
**Molecular Formula:** C₂₂H₃₂O₅  
**Molecular Weight:** 376.49  
**Target:** Endogenous Metabolite  
**Pathway:** Metabolic Enzyme/Protease  
**Storage:** Solution, -20°C, 2 years

---

**BIOLOGICAL ACTIVITY**

**Description**
Resolvin D1 (RvD1), an endogenous pro-resolving mediator of inflammation, is derived from omega-3 docosahexaenoic acid during the resolution phase of acute inflammation. Resolvin D1 blocks proinflammatory neutrophil migration by regulating actin polymerization, reduces TNF-α-mediated inflammation in macrophages, and enhances phagocytosis of apoptotic cells by macrophages\(^1\)\(^2\).

**IC₅₀ & Target**
Human Endogenous Metabolite

**In Vitro**
Resolvin D1 (RvD1) (1-100 nM; 15 minutes) induces dose-dependent short-term functional changes in primary human macrophages. RvD1 triggers intracellular Ca\(^{2+}\) release, blocks chemotactic migration, and stimulates phagocytosis of microbial particles with maximal efficiency at 10 nM\(^1\). Resolvin D1 (0-500 nM; 72 hours) shows a strong inhibition of LPS-induced TRAP and cathepsin K expression by RvD1 at different concentrations in RAW264.7 macrophages\(^2\).

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**
Resolvin D1 (RvD1) (100-1000 ng; i.p.; daily on days 10) improves RA (rheumatoid arthritis) clinical endpoints in arthritic mice\(^3\).

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>18-20 g thirty 8-week-old female DBA/1J mice (collagen antibody-induced arthritis (CAIA)) [3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>100, 500, and 1000 ng (or 1000 ng, daily on days 4-10)</td>
</tr>
<tr>
<td>Administration:</td>
<td>i.p. injection; daily on days 10</td>
</tr>
<tr>
<td>Result:</td>
<td>Exhibit a reduced arthritic score.</td>
</tr>
</tbody>
</table>

---

**REFERENCES**
