**Ppc-1**

**Cat. No.**: HY-117843  
**CAS No.**: 1245818-17-0  
**Molecular Formula**: C₂₁H₂₅NO₄  
**Molecular Weight**: 355.43  
**Target**: Mitochondrial Metabolism; Interleukin Related; Bacterial  
**Pathway**: Metabolic Enzyme/Protease; Immunology/Inflammation; Anti-infection  
**Storage**: Please store the product under the recommended conditions in the COA.

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**BIOLOGICAL ACTIVITY**

**Description**  
Ppc-1 is a mitochondrial uncoupler. Ppc-1 enhances mitochondrial oxygen consumption without adverse effects on ATP production. Ppc-1 is a cell-permeate interleukin-2 (IL-2) inhibitor. Ppc-1 inhibits the Gram-negative periodontopathogen *Porphyromonas gingivalis*. Ppc-1 has anti-obesity, antibacterial and anti-inflammatory activities.[1][2][3][4].

<table>
<thead>
<tr>
<th>IC₅₀ &amp; Target</th>
<th>IL-2</th>
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</table>

**In Vitro**  
Ppc-1 treatment (0-10 μM; 24 hours; Jurkat cells) significant inhibits IL-2 production in Jurkat cells with an IC₅₀ of 4 μM[2]. Ppc-1 (compound 6) has antiproliferative activities in K562 human leukemia, Hela cervical carcinoma, and 3T3-L1 mouse embryonic fibroblast cells. Ppc-1 shows about 50% inhibition at 15 μM in all cell lines. Ppc-1 inhibits the growth of K562 cells with an EC₅₀ of 13 μM[3]. Using the U937-3xκB-LUC human monocytic cell line, Ppc-1 dose-dependently inhibits the lipopolysaccharide-induced NF-κB activation[4].

**In Vivo**  
Ppc-1 (0-10 mg/kg; Intraperitoneal injection; once a week; for 8 weeks; female ICR mice) treatment suppresses weight gain with no abnormal effects on liver or kidney tissues, and no evidence of tumor formation[1]. Serum fatty acid levels are significantly elevated in mice treated with Ppc-1, while body fat content remained low. After a single administration, Ppc-1 distributes into various tissues of individual animals at low levels. Ppc-1 stimulates adipocytes in culture to release fatty acids, which might explain the elevated serum fatty acids in Ppc-1-treated mice[1].

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>Female ICR mice[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>0 mg/kg, 0.16 mg/kg, 0.8 mg/kg, 4 mg/kg, and 10 mg/kg</td>
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<tr>
<td>Administration:</td>
<td>Intraperitoneal injection; once a week; for 8 weeks</td>
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<tr>
<td>Result:</td>
<td>Suppressed weight gain in animals.</td>
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</tbody>
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**REFERENCES**


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

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