### Procyanidin B1

**Cat. No.:** HY-N0795  
**CAS No.:** 20315-25-7  
**Molecular Formula:** $C_{30}H_{26}O_{12}$  
**Molecular Weight:** 578.52  
**Target:** Toll-like Receptor (TLR)  
**Pathway:** Immunology/Inflammation  
**Storage:**  
- Powder: -20°C 3 years  
- 4°C: 2 years  
- In solvent: -80°C 6 months  
- -20°C: 1 month  

### SOLVENT & SOLUBILITY

**In Vitro**  
DMSO: 25 mg/mL (43.21 mM; Need ultrasonic)  

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.7285 mL</td>
<td>8.6427 mL</td>
<td>17.2855 mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3457 mL</td>
<td>1.7285 mL</td>
<td>3.4571 mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1729 mL</td>
<td>0.8643 mL</td>
<td>1.7285 mL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**In Vivo**  
1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
   Solubility: ≥ 2.5 mg/mL (4.32 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (4.32 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
Procyanidin B1 is a polyphenolic flavonoid isolated from commonly eaten fruits, binds to TLR4/MD-2 complex, and has anti-inflammatory activity.

**In Vitro**  
Procyanidin B1 is a polyphenolic flavonoid isolated from fruits and fruit juices, binds to TLR4/MD-2 complex, and has anti-inflammatory activity. Procyanidin B1 causes cellular toxicity at concentrations >100 µg/mL. Procyanidin B1 (100 µg/mL) inhibits LPS-induced TNF-α production, and expression of MD-2, TRAF6, NF-kB mRNA, phosphorylated p38 MAPK and NF-kB protein in THP1 cells[1]. Procyanidin B1 (50-100 µM) protects against Aβ oligomer-induced neuronal death. Procyanidin B1 potently inhibits the activation of caspase-3 at 100 µM, caspase-8 at concentrations of 30, 50, and 100 µM and caspase-9 at concentrations of 10, 30, 50, and 100 µM[2]. Procyanidin B1 (10, 20, 30 µM) significantly and dose-dependently induces expression of ACO and CPT1, with no obvious effect on mRNA expression of PPARα[3].
PROTOCOL

Cell Assay [1]

To investigate the cytotoxic effect of Procyanidin B1, viability of THP1 cells is assessed using CCK8 assay. THP1 cells are treated with Procyanidin B1 for 18 h, and 10 μL of CCK8 solution is then added to each well and the cultures are incubated for 4 h at 37°C. The optical density (OD) at 450 nm is measured using an ELx808 Absorbance Microplate Reader. The Procyanidin B1 concentration tested ranges from 50 to 200 μg/mL. Each sample is tested in triplicate[1].

CUSTOMER VALIDATION


See more customer validations on www.MedChemExpress.com

REFERENCES


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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA