Tyrosol

**Cat. No.:** HY-N0474  
**CAS No.:** 501-94-0  
**Molecular Formula:** C₈H₁₀O₂  
**Molecular Weight:** 138.16  
**Target:** NF-κB; Endogenous Metabolite  
**Pathway:** NF-κB; Metabolic Enzyme/Protease  
**Storage:** 4°C, stored under nitrogen

* In solvent: -80°C, 6 months; -20°C, 1 month (stored under nitrogen)

**SOLVENT & SOLUBILITY**

**In Vitro**

DMSO : ≥ 100 mg/mL (723.80 mM)  
* "≥" means soluble, but saturation unknown.  

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>7.2380 mL</td>
<td>36.1899 mL</td>
<td>72.3798 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>1.4476 mL</td>
<td>7.2380 mL</td>
<td>14.4760 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.7238 mL</td>
<td>3.6190 mL</td>
<td>7.2380 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

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 (18.09 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (18.09 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (18.09 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

Tyrosol is a derivative of phenethyl alcohol. Tyrosol attenuates pro-inflammatory cytokines from cultured astrocytes and NF-κB activation. Anti-oxidative and anti-inflammatory effects[1].

**IC₅₀ & Target**

Human Endogenous Metabolite (□□□□□)

**In Vivo**

Tyrosol (1.6 mM) significantly increases the cell viability of cultured astrocytes exposed to oxygen glucose deprivation.
Tyrosol (1.6 mM) attenuates the released TNF-α and IL-6 level from astrocyte via regulating Janus N-terminal kinase (JNK) [1]. The reduction of cytokines from astrocyte might be due to its inhibition of astrocyte activation and regulation of STAT3 signaling pathway since Tyrosol (1.6 mM) attenuates the expression level of GFAP (glial fibrillary acidic protein) and the phosphorylation of STAT3 [1]. Tyrosol prevents the degradation of IκBα and the increase of IκBα phosphorylation in astrocytes exposed to OGD, which leads to the suppression of NF-κB function during ischemia [1].

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

<table>
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<tr>
<th>In Vivo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-plantar injection of carrageenan causes a noticeable increase in paw thickness, reaching a peak after 2 h post-injection. This effect is reduced when Tyrosol (0.5 mg/kg) or Tyrosol-sulphate is injected prior to the treatment with carrageenan. Similar AUC values for paw oedema are obtained after the administration of Tyrosol at a dose of 0.5 mg/kg and Tyrosol-sulphate at a dose of 0.1 mg/kg.</td>
</tr>
</tbody>
</table>

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**REFERENCES**


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

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