6-Biopterin

Cat. No.: HY-102015
CAS No.: 22150-76-1
Molecular Formula: C₉H₁₁N₅O₃
Molecular Weight: 237.22
Target: NO Synthase; Endogenous Metabolite
Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease
Storage: 4°C, sealed storage, away from moisture
* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

**SOLVENT & SOLUBILITY**

**In Vitro**
DMSO: 6 mg/mL (25.29 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td>4.2155 mL</td>
<td>21.0775 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.8431 mL</td>
<td>4.2155 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.4215 mL</td>
<td>2.1077 mL</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: 1 mg/mL (4.22 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (4.22 mM); Suspended solution

**BIOLOGICAL ACTIVITY**

**Description**
6-Biopterin (L-Biopterin), a pterin derivative, is a NO synthase cofactor.

**IC₅₀ & Target**
Human Endogenous Metabolite

**In Vitro**
6-biopterin is extremely cytotoxic to human melanocytes under in vitro conditions. Thioredoxin reductase has the capacity to reduce 6-biopterin to q-BH2 where further reduction to 6-BH4 follows via dihydropteridine reductase or reduced glutathione. (6R)5,6,7,8 tetrahydrobiopterin undergoes redox-cycling by its oxidation to quinonoid dihydrobiopterin and to 6-biopterin through consecutive two electron oxidation reactions[1].

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