DL-Homocysteine

Cat. No.: HY-W040821
CAS No.: 454-29-5
Molecular Formula: C₄H₉NO₂S
Molecular Weight: 135.19
Target: Endogenous Metabolite
Pathway: Metabolic Enzyme/Protease
Storage:
- Powder: -20°C, 3 years
- In solvent: -80°C, 6 months
- -20°C, 1 month

SOLVENT & SOLUBILITY

In Vitro

H₂O : 75 mg/mL (554.77 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>7.3970 mL</td>
<td>36.9850 mL</td>
<td>73.9700 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>1.4794 mL</td>
<td>7.3970 mL</td>
<td>14.7940 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.7397 mL</td>
<td>3.6985 mL</td>
<td>7.3970 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description
DL-Homocysteine is a weak neurotoxin, and can affect the production of kynurenic acid in the brain.

IC₅₀ & Target
Human Endogenous Metabolite

In Vitro

DL-Homocysteine (0.1-0.5 mM) significantly enhances kynurenic acid (KYNA) production in rat cortical slices, and diminishes the production of at 3.0, 5.0, and 10.0 mM, with the estimated IC₅₀ of 6.4 (5.5-7.5) mM. DL-Homocysteine dose-dependently inhibits kynurenine aminotransferases I (KATI) activity at concentrations ≥0.2 mM, with an IC₅₀ value of 0.566 (0.442-0.724) mM, and the activity of KAT II with IC₅₀ value of 8.046 (5.804-11.154) mM[1].

In Vivo

DL-Homocysteine (1.3 mmol/kg, i.p.) increases KYNA content (pmol/g tissue) from 8.47 ± 1.57 to 13.04 ± 2.86 and 11.4 ± 1.72 in cortex, and from 4.11 ± 1.54 to 10.02 ± 3.08 in rat hippocampus[1].

REFERENCES