Product Name: Theanine
CAS Number: 3081-61-6
IUPAC Name: N-Ethyl-L-glutamine

1. PHYSICAL AND CHEMICAL PROPERTIES

   Batch Molecular Formula: C₇H₁₄N₂O₃
   Batch Molecular Weight: 174.2
   Physical Appearance: White solid
   Solubility: water to 100 mM
   Storage: Store at RT

2. ANALYTICAL DATA

   ¹H NMR: Consistent with structure
   Mass Spectrum: Consistent with structure
   Microanalysis:
   
   
<table>
<thead>
<tr>
<th>Carbon</th>
<th>Hydrogen</th>
<th>Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical 48.26</td>
<td>8.1</td>
<td>16.08</td>
</tr>
<tr>
<td>Found 48.27</td>
<td>8.25</td>
<td>16.2</td>
</tr>
</tbody>
</table>

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Product Name: Theanine  
CAS Number: 3081-61-6  
IUPAC Name: N-Ethyl-L-glutamine  
Catalog No.: 3847  
EC Number: 221-379-0  
Batch No.: 1

Description:
Amino acid analog of glutamine and component of green tea. Shown to bind to AMPA, Kainate, NMDA and group I mGlu receptors. Displays neuroprotective effects in vivo. Promotes self-renewal of human embryonic stem cells (hESC).

Physical and Chemical Properties:
Batch Molecular Formula: C7H14N2O3  
Batch Molecular Weight: 174.2  
Physical Appearance: White solid

Batch Molecular Structure:

![Molecular Structure Image]

Storage: Store at RT

Solubility & Usage Info:
Water to 100 mM

Stability and Solubility Advice:
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References: