1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{20}\text{H}_{19}\text{N}_{3}\text{O}_{6}\text{S} \cdot \text{\frac{3}{4}}\text{H}_{2}\text{O} \)

Batch Molecular Weight: 442.96

Physical Appearance: Off White solid

Solubility: DMSO to 20 mM
3eq. NaOH to 10 mM

Storage: Store at RT

2. ANALYTICAL DATA

HPLC: Shows 98.9% purity

\(^1\text{H NMR:}\) Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

<table>
<thead>
<tr>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.23</td>
<td>54.17</td>
</tr>
<tr>
<td>4.66</td>
<td>4.32</td>
</tr>
<tr>
<td>9.49</td>
<td>9.48</td>
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</tbody>
</table>
Product Information

Product Name: ACET  
Catalog No.: 2728  
Batch No.: 6

CAS Number: 936095-50-0  
IUPAC Name: (S)-1-(2-Amino-2-carboxyethyl)-3-(2-carboxy-5-phenylthiophene-3-yl-methyl)-5-methylpyrimidine-2,4-dione

Description:
ACET is a potent and selective GluK1 (formerly GluR5) containing kainate receptor antagonist (IC_{50} = 7 nM) that displays selectivity over GluK2 (formerly GluR6) containing kainate, NMDA, AMPA and group I mGlu receptors. Reversibly blocks induction of NMDA receptor-independent long term potentiation (LTP) in vitro at nanomolar concentrations. Please refer to IUPHAR Guide to Pharmacology for the most recent naming conventions.

Physical and Chemical Properties:
Batch Molecular Formula: C_{20}H_{19}N_{5}O_{6}S.¾H_{2}O  
Batch Molecular Weight: 442.96  
Physical Appearance: Off White solid  
Minimum Purity: ≥98%

Batch Molecular Structure:

Reference:
Dargan et al (2009) ACET is a highly potent and specific kainate receptor antagonist: Characterisation and effects on hippocampal mossy fibre function. Neuropharmacology 56 121. PMID: 18789344.


Storage: Store at RT

Solubility & Usage Info:
DMSO to 20 mM  
3eq. NaOH to 10 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.