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## DATASHEET

ACET

### Product overview

|                          |   |
|--------------------------|---|
| <b>Name</b>              | ACET  |
| <b>Cat No</b>            | HB0102  |
| <b>Biological action</b> | Antagonist  |
| <b>Purity</b>            | >98%  |
| <b>Description</b>       | Potent, selective GluK1 (GluR5) kainate receptor antagonist |

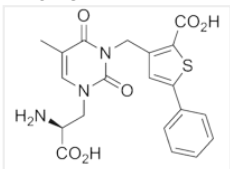
### Biological Data

|                               |  |
|-------------------------------|--|
| <b>Biological description</b> | Potent and selective GluK1 (GluR5) kainate receptor antagonist ( $K_b = 1.4$ nM). Ineffective at GluK2, GluK3 and mGluR <sub>6</sub> and <sub>7</sub> receptors. Blocks NMDA receptor -independent long term potentiation induction. |
|-------------------------------|--|

### Solubility & Handling

|                             |   |
|-----------------------------|---|
| <b>Storage instructions</b> | Room temperature  |
| <b>Solubility overview</b>  | Soluble in NaOH(aq) (10mM)  |
| <b>Important</b>            | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

### Chemical Data

|                           |  |
|---------------------------|--|
| <b>Chemical name</b>      | (S)-1-(2-Amino-2-carboxyethyl)-3-(2-carboxy-5-phenylthiophene-3-ylmethyl)-5-methylpyrimidine-2,4-dione |
| <b>Molecular Weight</b>   | 429.45   |
| <b>Chemical structure</b> |                     |
| <b>Molecular Formula</b>  | C <sub>20</sub> H <sub>19</sub> N <sub>3</sub> O <sub>6</sub> S  |
| <b>CAS Number</b>         | 936095-50-0  |
| <b>PubChem identifier</b> | 16125102   |
| <b>SMILES</b>             | O=C(C(C)=CN1C[C@@H](C(O)=O)N)N(CC2=C(C(O)=O)SC(C3=CC=CC=C3)=C2)C1=O                                    |
| <b>InChiKey</b>           | LCZDCKMQSBGXAH-AWEZLNQCLSA-N   |

### References

**ACET is a highly potent and specific kainate receptor antagonist: characterisation and effects on hippocampal mossy fibre function.**

Dargan SL *et al* (2009) *Neuropharmacology* 56(1)

**PubMedID** [18789344](https://pubmed.ncbi.nlm.nih.gov/18789344/)

**Effects of the selective kainate receptor antagonist ACET on altered sensorimotor gating in a genetic model of reduced NMDA receptor function.**

Duncan GE *et al* (2012) Brain Res 1443

**PubMedID** [22297176](#)

**Synthesis and pharmacological characterization of N3-substituted willardiine derivatives: role of the substituent at the 5-position of the uracil ring in the development of highly potent and selective GLUK5 kainate receptor antagonists.**

Dolman NP *et al* (2007) J Med Chem 50(7)

**PubMedID** [17348638](#)

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