



# **Certificate of Analysis**

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Product Name: Brivaracetam Catalog No.: 7271 Batch No.: 1

CAS Number: 357336-20-0

IUPAC Name:  $(\alpha S, 4R) - \alpha - Ethyl - 2 - oxo - 4 - propyl - 1 - pyrrolidineacetamide$ 

#### 1. PHYSICAL AND CHEMICAL PROPERTIES

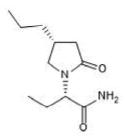
Batch Molecular Formula: $C_{11}H_{20}N_2O_2$ Batch Molecular Weight:212.29Physical Appearance:White solid

Solubility: DMSO to 100 mM

water to 100 mM

Storage: Store at -20°C

**Batch Molecular Structure:** 



#### 2. ANALYTICAL DATA

HPLC: Shows 100.0% purity

<sup>1</sup>H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

**Optical Rotation:**  $[\alpha]_D = -58.1$  (Concentration = 1, Solvent = Methanol)

Microanalysis:

Carbon Hydrogen Nitrogen

Theoretical 62.24 9.5 13.2 Found 62.27 9.54 13.28

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use



## **Product Information**

Print Date: Apr 15th 2021

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IUPAC Name:  $(\alpha S, 4R) - \alpha - Ethyl - 2 - oxo - 4 - propyl - 1 - pyrrolidineacetamide$ 

#### **Description:**

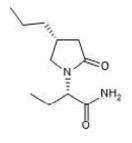
Brivaracetam is an antiepileptic compound that is a ligand for synaptic vesicle glycoprotein 2A (SV2A;  $K_d$  = 50 nM for human SV2A in vitro). Brivaracetam displays selectivity for SV2A at 10  $\mu$ M, against a panel of 55 receptors, enzymes, ion channels and transporters. In mice, Brivaracetam protects against clonic audiogenic seizures.

#### **Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>11</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub> Batch Molecular Weight: 212.29 Physical Appearance: White solid

Minimum Purity: ≥98%

### **Batch Molecular Structure:**



Storage: Store at -20°C

#### Solubility & Usage Info:

DMSO to 100 mM 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:

Rogawski (2016) A new SV2A ligand for epilepsy. Cell. 167 587. PMID: 27768878.

**Gillard** *et al* (2011) Binding characteristics of brivaracetam, a selective, high affinity SV2A ligand in rat, mouse and human brain: relationship to anti-convulsant properties. Eur.J.Pharmacol. *664* 36. PMID: 21575627.

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