

Product Name: ZZL 7

Catalog No.: 7898

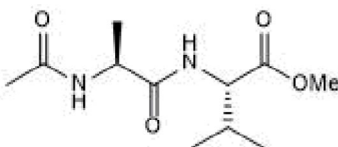
Batch No.: 1

CAS Number: 99141-91-0

IUPAC Name: *N*-Acetyl-L-alanyl-L-valine methyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₂₀N₂O₄.
Batch Molecular Weight: 244.29
Physical Appearance: White solid
Solubility: ethanol to 100 mM
 DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.08	8.25	11.47
Found	54.09	8.32	11.43

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

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CAS Number: 99141-91-0

IUPAC Name: *N*-Acetyl-L-alanyl-L-valine methyl ester

Description:

ZZL-7 is a fast-acting antidepressant that enhances 5-HT (serotonin) signaling in forebrain circuits. ZZL-7 disrupts the interaction between the 5-HT transporter (SERT) and neuronal nitric oxide synthase (nNOS) in the dorsal raphe nucleus (DRN), reduces extracellular 5-HT concentration and downregulates 5-HT_{1A} receptor auto-activity in the DRN. This reduced auto-inhibition enables increase in firing frequency of serotonergic neurons in the DRN and increases in 5-HT release in the medial hippocampus. ZZL-7 readily crosses the blood-brain barrier.

Physical and Chemical Properties:

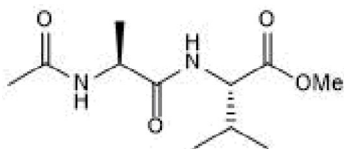
Batch Molecular Formula: C₁₁H₂₀N₂O₄.

Batch Molecular Weight: 244.29

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Sun *et al* (2022) Design of fast-onset antidepressant by dissociating SERT from nNOS in the DRN. *Science* **378** 390. PMID: 36302033.

Storage: Store at -20°C

Solubility & Usage Info:

ethanol to 100 mM

DMSO 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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.

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