

# Certificate of Analysis

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**Product Name:** FPS ZM1

**Catalog No.:** 6237

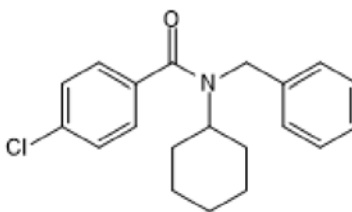
**Batch No.:** 1

CAS Number: 945714-67-0

IUPAC Name: 4-Chloro-*N*-cyclohexyl-*N*-(phenylmethyl)benzamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>22</sub>ClNO  
**Batch Molecular Weight:** 327.85  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.08 (CH<sub>2</sub>Cl<sub>2</sub>:Petrol 1:1)  
**HPLC:** Shows 99.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	73.27	6.76	4.27
Found	73.41	6.85	4.22

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

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**Description:**

High affinity antagonist of the receptor for advanced glycation end products (RAGE) ( $K_i = 25$  nM). Blocks A $\beta$  binding to the V domain of RAGE and inhibits A $\beta$ 40- and A $\beta$ 42-induced cellular stress in RAGE-expressing cells in vitro and in the mouse brain in vivo. Blocks  $\beta$ -secretase activity, A $\beta$  production, microglia activation and neuroinflammation in vivo. BBB permeable.

**Physical and Chemical Properties:**

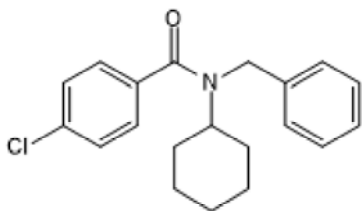
Batch Molecular Formula: C<sub>20</sub>H<sub>22</sub>ClNO

Batch Molecular Weight: 327.85

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol 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:**

**Hong *et al*** (2016) Effects of RAGE-Specific Inhibitor FPS-ZM1 on Amyloid- $\beta$  Metabolism and AGEs-Induced Inflammation and Oxidative Stress in Rat Hippocampus. *Neurochem.Res.* **41** 1192. PMID: 26738988.

**Deane *et al*** (2012) A multimodal RAGE-specific inhibitor reduces amyloid  $\beta$ -mediated brain disorder in a mouse model of Alzheimer disease. *J.Clin.Invest.* **122** 1377. PMID: 22406537.

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