

## Certificate of Analysis

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**Product Name:** A 740003

**Catalog No.:** 3701

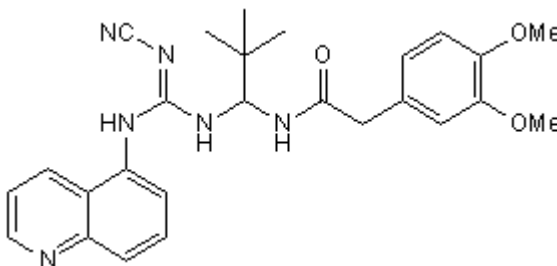
**Batch No.:** 3

CAS Number: 861393-28-4

IUPAC Name: *N*-[1-[[[(Cyanoamino)(5-quinolinylamino)methylene]amino]-2,2-dimethylpropyl]-3,4-dimethoxybenzeneacetamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>26</sub>H<sub>30</sub>N<sub>6</sub>O<sub>3</sub>  
**Batch Molecular Weight:** 474.55  
**Physical Appearance:** Off-white solid  
**Solubility:** DMSO to 20 mM  
 ethanol to 5 mM with gentle warming  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 98.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.8	6.37	17.71
Found	65.71	6.02	17.8

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

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**Description:**

Potent and selective P2X<sub>7</sub> receptor antagonist (IC<sub>50</sub> values are 18 and 40 nM for rat and human receptors respectively). Displays selectivity over a variety of P2X and P2Y receptors up to a concentration of 100 μM. Reduces nociception in animal models of persistent neuropathic and inflammatory pain. Also reduces neuroblastoma tumor growth in mice.

**Physical and Chemical Properties:**

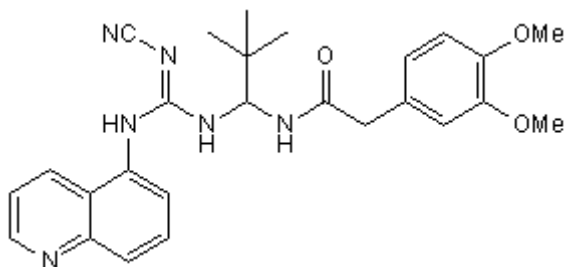
Batch Molecular Formula: C<sub>26</sub>H<sub>30</sub>N<sub>6</sub>O<sub>3</sub>

Batch Molecular Weight: 474.55

Physical Appearance: Off-white solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Honore et al** (2006) A-740003 [N-(1-[[[(cyanoimino)(5-quinolinylamino)methyl]amino]-2,2-dimethylpropyl)-2-(3,4-dimethoxyphenyl)acetamide], a novel and selective P2X<sub>7</sub> receptor antagonist, dose-dependently reduces neuropathic pain in the rat. *J.Pharmacol.Exp.Ther.* **319** 1376. PMID: 16982702.

**King** (2007) Novel P2X<sub>7</sub> receptor antagonists ease the pain. *Br.J.Pharmacol.* **151** 565. PMID: 17471176.

**Donnelly-Roberts et al** (2009) Mammalian P2X<sub>7</sub> receptor pharmacology: comparison of recombinant mouse, rat and human P2X<sub>7</sub> receptors. *Br.J.Pharmacol.* **157** 1203. PMID: 19558545.

**Amoroso et al** (2015) The P2X<sub>7</sub> receptor is a key modulator of the PI3K/GSK3β/VEGF signaling network: evidence in experimental neuroblastoma. *Oncogene.* PMID: 25619831.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 20 mM

ethanol to 5 mM with gentle warming

**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.

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