

**Product Name:** Nimodipine

**Catalog No.:** 0600

**Batch No.:** 5

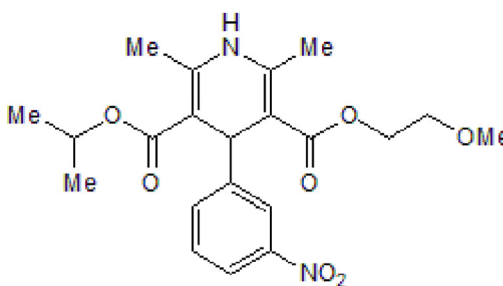
CAS Number: 66085-59-4

EC Number: 266-127-0

IUPAC Name: 1,4-Dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid 2-methoxyethyl 1-methylethyl ester

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>21</sub>H<sub>26</sub>N<sub>2</sub>O<sub>7</sub>.  
**Batch Molecular Weight:** 418.45  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.5% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 60.28  | 6.26     | 6.69     |
| Found       | 60.01  | 6.26     | 6.72     |

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

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**Description:**

Nimodipine is a L-type Ca<sup>2+</sup> channel blocker. Induces autophagy. Nimodipine is modulating pericytes and other inflammation signals like Hypoxia and leukocyte stalling to improve cognitive function in Alzheimer's disease. Nimodipine reduces pericytes and other inflammation signals like hypoxia and leukocyte stalling and improves cognitive function in Alzheimer's disease model mice.

**Physical and Chemical Properties:**

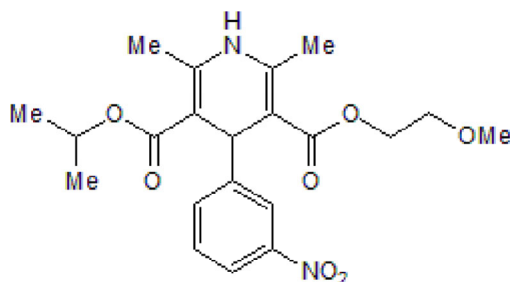
Batch Molecular Formula: C<sub>21</sub>H<sub>26</sub>N<sub>2</sub>O<sub>7</sub>.

Batch Molecular Weight: 418.45

Physical Appearance: Yellow solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**Storage:** Store at RT

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

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.

**References:**

**Korte et al** (2024) Inhibiting Ca<sup>2+</sup> channels in Alzheimer's disease model mice relaxes pericytes, improves cerebral blood flow and reduces immune cell stalling and hypoxia. *Nat. Neurosci.* PMID: 39294491.

**Fleming et al** (2011) Chemical modulators of autophagy as biological probes and potential therapeutics. *Nat.Chem.Biol.* **7** 9. PMID: 21164513.

**Batuecas et al** (1998) Effects of chronic nimod. on working memory of old rats in relation to defects in synaptosomal calcium homeostasis. *Eur.J.Pharmacol.* **350** 141. PMID: 9696401.

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