

# Certificate of Analysis

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**Product Name:** NNC 55-0396 dihydrochloride

**Catalog No.:** 2268

**Batch No.:** 4

**CAS Number:** 357400-13-6

**IUPAC Name:** (1S,2S)-2-[2-[[3-(1*H*-Benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl cyclopropanecarboxylate dihydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>30</sub>H<sub>38</sub>FN<sub>3</sub>O<sub>2</sub>·2HCl·H<sub>2</sub>O

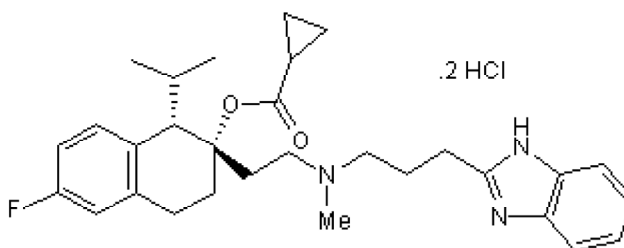
**Batch Molecular Weight:** 582.59

**Physical Appearance:** White solid

**Solubility:** water to 25 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.7 (Dichloromethane:Methanol [9:1])

**HPLC:** Shows 99.0% purity

**Chiral HPLC:** Shows 99.1% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	61.85	7.27	7.21
Found	61.62	7.27	7.07

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

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**Description:**

NNC 55-0396 dihydrochloride is a highly selective T-type calcium channel blocker. Displays IC<sub>50</sub> values of 6.8 and > 100 µM for inhibition of Ca<sub>v</sub>3.1 T-type channels and HVA currents respectively in INS-1 cells.

**Physical and Chemical Properties:**

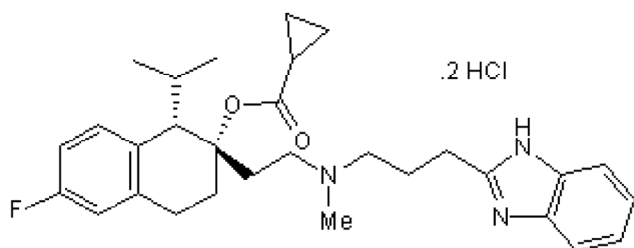
Batch Molecular Formula: C<sub>30</sub>H<sub>38</sub>FN<sub>3</sub>O<sub>2</sub>·2HCl·H<sub>2</sub>O

Batch Molecular Weight: 582.59

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 25 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:**

**Chen *et al*** (2010) Ca<sub>v</sub>3.2 T-type Ca<sup>2+</sup> channel-dependent activation of ERK in paraventricular thalamus modulates acid-induced chronic muscle pain. *J.Neurosci.* **30** 10360. PMID: 20685979.

**Huang *et al*** (2004) NNC 55-0396 [(1S,2S)-2-(2-(N-[(3-benzimidazol-2-yl)propyl]-N-methylamino)ethyl)-6-fluoro-1,2,3,4-tetrahydro-1-isopropyl-2-naphthyl cyclopropanecarboxylate dihydrochloride]: A new selective inhibitor of T-type calcium cha *J.Pharmacol.Exp.Ther.* **309** 193. PMID: 14718587.

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