

## Certificate of Analysis

**Product Name:** Cardionogen 1

**Catalog No.:** 4475

**Batch No.:** 1

CAS Number: 577696-37-8

IUPAC Name: 6-Cyclohexyl-3-(2-furanyl)-1,2,4-triazolo[3,4-*b*][1,3,4]thiadiazole

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>14</sub>N<sub>4</sub>OS.¼H<sub>2</sub>O

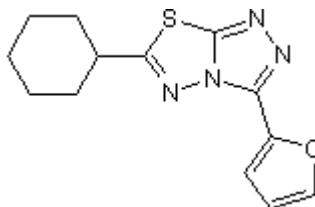
**Batch Molecular Weight:** 278.84

**Physical Appearance:** Off-white solid

**Solubility:** DMSO to 20 mM  
ethanol to 10 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.75 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.1])

**HPLC:** Shows 99.6% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen | Sulfur |
|-------------|--------|----------|----------|--------|
| Theoretical | 56     | 5.24     | 20.09    | 11.5   |
| Found       | 56.39  | 5.12     | 20.28    | 11.79  |

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**Description:**

Wnt signaling modulator. Potently inhibits Wnt/ $\beta$ -catenin-dependent transcription in murine ES cells ( $EC_{50}$  = 23 nM) and zebrafish embryos. Enlarges heart size via cardiomyocyte hyperplasia; induces ES cell cardiac differentiation.

**Physical and Chemical Properties:**

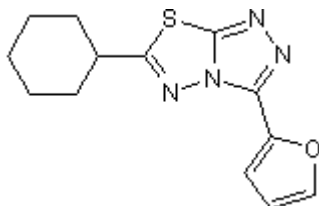
Batch Molecular Formula:  $C_{13}H_{14}N_4OS \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 278.84

Physical Appearance: Off-white solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**References:**

Ni *et al* (2011) Discovering small molecules that promote cardiomyocyte generation by modulating Wnt signaling. *Chem.Biol.* **18** 1658. PMID: 22195568.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 20 mM

ethanol to 10 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.

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