

# Certificate of Analysis

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**Product Name:** Wnt-C59

**Catalog No.:** 5148

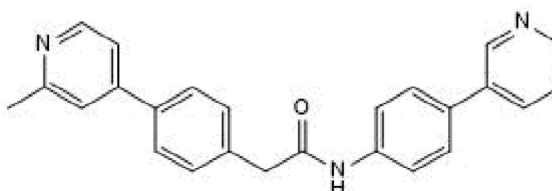
**Batch No.:** 7

**CAS Number:** 1243243-89-1

**IUPAC Name:** 4-(2-Methyl-4-pyridinyl)-N-[4-(3-pyridinyl)phenyl]benzeneacetamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>25</sub>H<sub>21</sub>N<sub>3</sub>O  
**Batch Molecular Weight:** 379.45  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 20 mM  
 ethanol to 20 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	79.13	5.58	11.07
Found	79.1	5.58	10.95

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

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**Description:**

Wnt-C59 is a highly potent inhibitor of the MBOAT (membrane-bound O-acyltransferase) family member, Porcupine (PORCN) ( $IC_{50}$  = 74 pM), that mediates WNT palmitoylation and secretion. Wnt-C59 potently inhibits the processing of both canonical (1, 2, 3a, 6, 7b, 8a, 9a, 9b, 10) and non-canonical (4, 5a, 11, 16) Wnt subtypes. Wnt-C59 blocks progression of mammary tumors in MMTV-WNT1 transgenic mice and downregulates Wnt/ $\beta$ -catenin target genes. Wnt-C59-treated tumors show a decrease in  $\beta$ -catenin, CyclinD1 and c-Myc. Wnt-C59 induces cardiomyocyte differentiation from human iPSCs following culture with CHIR 99021 (Cat. No. 4423). Wnt-C59 eff... Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

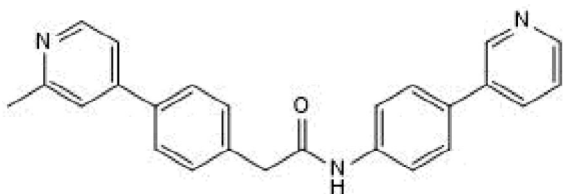
Batch Molecular Formula:  $C_{25}H_{21}N_3O$

Batch Molecular Weight: 379.45

Physical Appearance: White solid

**Minimum Purity:**  $\geq 99\%$

**Batch Molecular Structure:**



**References:**

**Jiang *et al*** (2021) Generation of pancreatic progenitors from human pluripotent stem cells by small molecules. *Stem Cell Rep.* **16** 2395. PMID: 34450037.

**Motono *et al*** (2016) WNT-C59, a small-molecule WNT inhibitor, efficiently induces anterior cortex that includes cortical motor neurons from human pluripotent stem cells. *Stem Cells Transl. Med.* **5** 552. PMID: 26941358.

**Burridge *et al*** (2014) Chemically defined generation of human cardiomyocytes. *Nat. Methods* **11** 855. PMID: 24930130.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 20 mM

ethanol to 20 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.

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