

## Certificate of Analysis

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**Product Name:** Indibulin

**Catalog No.:** 3728

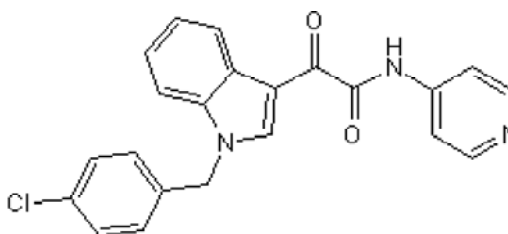
**Batch No.:** 1

CAS Number: 204205-90-3

IUPAC Name: 2-[1-(4-Chlorobenzyl)-1*H*-indol-3-yl]-2-oxo-*N*-pyridin-4-ylacetamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>22</sub>H<sub>16</sub>ClN<sub>3</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 389.83  
**Physical Appearance:** Off-white solid  
**Solubility:** DMSO to 25 mM  
**Storage:** Desiccate at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 97.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	67.78	4.14	10.78
Found	67.65	4.2	10.75

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

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**Description:**

Microtubule destabilizer that blocks tubulin polymerization ( $IC_{50}$  = 0.3  $\mu$ M). Blocks cell cycle progression at metaphase and displays antitumor activity against a variety of malignancies in vitro ( $IC_{50}$  values ranging from 0.036 - 0.285  $\mu$ M). Induces complete tumor remission in the Yoshida AH13 rat sarcoma model in vivo. Lacks neurotoxicity due to an ability to discriminate between posttranslationally modified tubulin in mature neuronal microtubules and less-modified tubulin present in immature neuronal or nonneuronal microtubules. Displays oral availability and efficacy towards MDR tumor cells.

**Physical and Chemical Properties:**

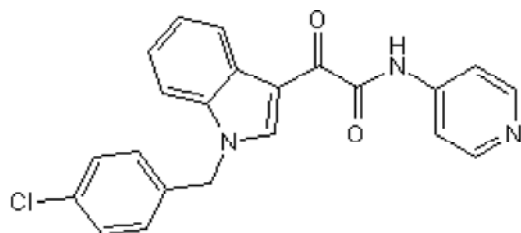
Batch Molecular Formula:  $C_{22}H_{16}ClN_3O_2$

Batch Molecular Weight: 389.83

Physical Appearance: Off-white solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**References:**

**Wienecke and Bacher** (2009) Indibulin, a novel microtubule inhibitor, discriminates between mature and nonneuronal tubulin. *Cancer Res.* **69** 171. PMID: 19118000.

**Kanzawa et al** (2005) Microtubule inhibitor D-24851 induces p53-independent apoptotic cell death in malignant glioma cells through Bcl-2 phosphorylation and Bax translocation. *Int.J.Oncol.* **26** 589. PMID: 15703812.

**Bacher et al** (2001) D-24851, a novel synthetic microtubule inhibitor, exerts curative antitumoral activity *in vivo*, shows efficacy toward multidrug-resistant tumor cells, and lacks neurotoxicity. *Cancer Res.* **61** 392. PMID: 11196193.

**Storage:** Desiccate at -20°C

**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 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. 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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