

## Certificate of Analysis

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**Product Name:** (S)-(-)-Blebbistatin

**Catalog No.:** 1852

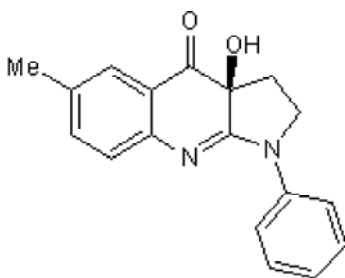
**Batch No.:** 5

CAS Number: 856925-71-8

IUPAC Name: (3aS)-(-)-1,2,3,3a-Tetrahydro-3a-hydroxy-6-methyl-1-phenyl-4*H*-pyrrolo[2,3-*b*]quinolin-4-one

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 292.34  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.6% purity  
**Chiral HPLC:** Shows 99.9% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	73.96	5.52	9.58
Found	73.61	5.55	9.78

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**Description:**

(S)-(-)-Blebbistatin is a selective inhibitor of myosin II ATPase activity ( $IC_{50}$  ~0.5 - 5  $\mu$ M); active enantiomer of ( $\pm$ )-blebbistatin. Inhibits contraction of the cleavage furrow without disrupting mitosis or contractile ring assembly. (S)-(-)-Blebbistatin rapidly and reversibly blocks cell blebbing, and disrupts directed cell migration and cytokinesis in vertebrate cells. Inactive Enantiomer and Racemate also available.

**Physical and Chemical Properties:**

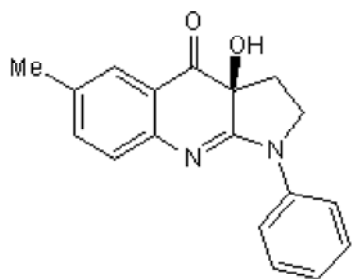
Batch Molecular Formula:  $C_{18}H_{16}N_2O_2$

Batch Molecular Weight: 292.34

Physical Appearance: Yellow solid

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

**Batch Molecular Structure:**



**References:**

**Limouze et al** (2004) Specificity of blebbistatin, an inhibitor of myosin II. *J.Muscle Res.Cell Motil.* **25** 337. PMID: 15548862.

**Straight et al** (2003) Dissecting temporal and spatial control of cytokinesis with a myosin II inhibitor. *Science* **299** 1743. PMID: 12637748.

**Straight et al** (2002) Dissecting cytokinesis with small molecules. *Amer.Soc.Cell Biol.Abstr.* 2515.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**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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