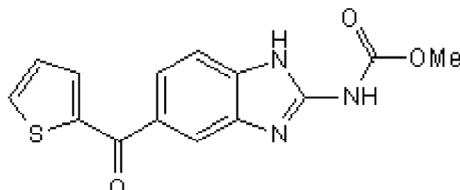


**Certificate of Analysis**[www.tocris.com](http://www.tocris.com)**Product Name:** Nocodazole**Catalog No.:** 1228**Batch No.:** 5

CAS Number: 31430-18-9

EC Number: 250-626-5

IUPAC Name: [5-(2-Thienylcarbonyl)-1H-benzimidazol-2-yl]carbamic acid methyl ester

**1. PHYSICAL AND CHEMICAL PROPERTIES****Batch Molecular Formula:** C<sub>14</sub>H<sub>11</sub>N<sub>3</sub>O<sub>3</sub>S**Batch Molecular Weight:** 301.32**Physical Appearance:** Pale brown solid**Solubility:** DMSO to 50 mM**Storage:** Store at RT**Batch Molecular Structure:****2. ANALYTICAL DATA****HPLC:** Shows 98.4% purity**<sup>1</sup>H NMR:** Consistent with structure**Mass Spectrum:** Consistent with structure**Microanalysis:** Carbon Hydrogen Nitrogen

Theoretical 55.8 3.68 13.95

Found 54.93 3.64 13.51

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

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## Product Information

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**Product Name:** Nocodazole

CAS Number: 31430-18-9

IUPAC Name: [5-(2-Thienylcarbonyl)-1H-benzimidazol-2-yl]carbamic acid methyl ester

**Catalog No.:** 1228

**Batch No.:** 5

EC Number: 250-626-5

**Description:**

Nocodazole is a microtubule inhibitor; inhibits mitosis. Also inhibits autophagosome-lysosome fusion. Enhances homology-directed repair (HDR) efficiency 9 to 31% (depending on cell cycle phase) and increases Cas9-mediated gene editing frequencies.

**Physical and Chemical Properties:**

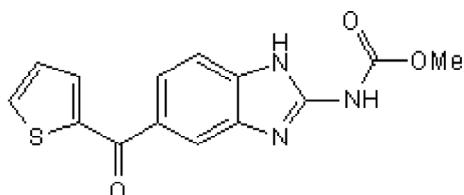
Batch Molecular Formula: C<sub>14</sub>H<sub>11</sub>N<sub>3</sub>O<sub>3</sub>S

Batch Molecular Weight: 301.32

Physical Appearance: Pale brown solid

**Minimum Purity:** ≥95%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 50 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:**

**Lin et al** (2014) Enhanced homology-directed human genome engineering by controlled timing of CRISPR/Cas9 delivery. *Elife* **3** e04766. PMID: 25497837.

**Mizushima et al** (2010) Methods in mammalian autophagy research. *Cell* **140** 313. PMID: 20144757.

**Webb et al** (2004) Microtubule disruption inhibits autophagosome-lysosome fusion: implications for studying the roles of aggresomes in polyglutamine diseases. *Int.J.Biochem.Cell Biol.* **36** 2541. PMID: 15325591.

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