

Certificate of Analysis

Product Name: Nocodazole

Catalog No.: 1228

Batch No.: 4

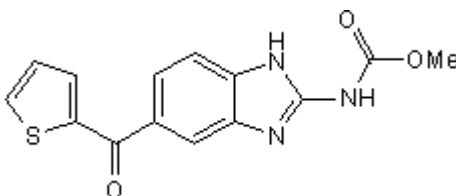
CAS Number: 31430-18-9

EC Number: 250-626-5

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₁N₃O₃S
Batch Molecular Weight: 301.32
Physical Appearance: Pale beige solid
Solubility: DMSO to 50 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Dichloromethane:Methanol [9:1])
HPLC: Shows 95.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.8	3.68	13.95
Found	55.8	3.68	13.99

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

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Description:

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:

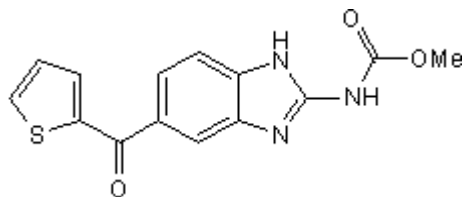
Batch Molecular Formula: C₁₄H₁₁N₃O₃S

Batch Molecular Weight: 301.32

Physical Appearance: Pale beige solid

Minimum Purity: >95%

Batch Molecular Structure:



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 aggregates in polyglutamine diseases. *Int.J.Biochem.Cell Biol.* **36** 2541. PMID: 15325591.

Vasquez et al (1997) Nanomolar concentrations of nocodazole alter microtubule dynamic instability *in vivo* and *in vitro*. *Mol.Biol.Cell* **8** 973. PMID: 9201709.

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. 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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