

# Certificate of Analysis

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**Product Name:** Ro 3280

**Catalog No.:** 5968

**Batch No.:** 1

CAS Number: 1062243-51-9

IUPAC Name: 4-[(9-Cyclopentyl-7,7-difluoro-6,7,8,9-tetrahydro-5-methyl-6-oxo-5H-pyrimido[4,5-b][1,4]diazepin-2-yl)amino]-3-methoxy-N-(1-methyl-4-piperidiny)benzamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>27</sub>H<sub>35</sub>F<sub>2</sub>N<sub>7</sub>O<sub>3</sub>·H<sub>2</sub>O

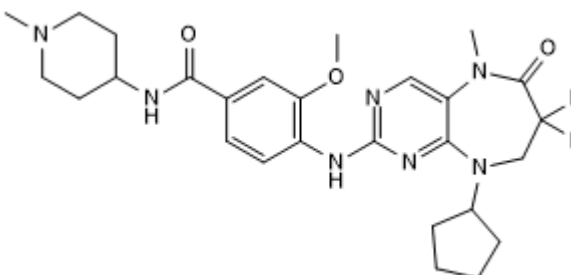
**Batch Molecular Weight:** 561.63

**Physical Appearance:** White solid

**Solubility:** DMSO to 50 mM  
ethanol to 50 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.4% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 57.74  | 6.64     | 17.46    |
| Found       | 57.56  | 6.36     | 17.3     |

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

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**Description:**

Potent and selective PLK inhibitor ( $IC_{50} = 3$  nM). Exhibits selectivity for PLK1 over a panel of other kinases. Inhibits growth of a range of tumor cells lines in vitro and induces apoptosis in leukemia cells. Exhibits antitumor activity in mouse colorectal and nasopharyngeal cancer models in vivo.

**Physical and Chemical Properties:**

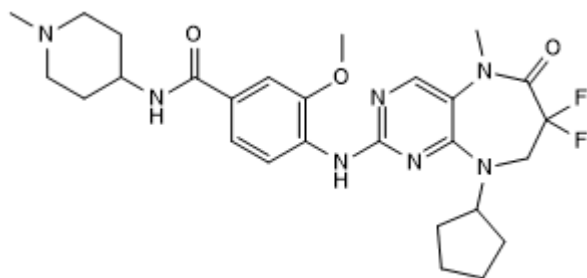
Batch Molecular Formula:  $C_{27}H_{35}F_2N_7O_3 \cdot H_2O$

Batch Molecular Weight: 561.63

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 50 mM  
ethanol 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.

**References:**

**Wang et al** (2015) Molecular targeting of the oncoprotein PLK1 in pediatric acute myeloid leukemia: RO3280, a novel PLK1 inhibitor, induces apoptosis in leukemia cells. *Int.J.Mol.Sci.* **16** 1266. PMID: 25574601.

**Cheung et al** (2013) Polo-like kinase inhibitor Ro5203280 has potent antitumor activity in nasopharyngeal carcinoma. *Mol.Cancer Ther.* **12** 1393. PMID: 23686835.

**Chen et al** (2012) Identification of novel, potent and selective inhibitors of Polo-like kinase 1. *Bioorg.Med.Chem.Lett.* **22** 1247. PMID: 22172702.

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