Print Date: Apr 12th 2022

Certificate of Analysis

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Product Name: **Ro 3306** **Catalog No.: 4181** **Batch No.: 2**

CAS Number: 872573-93-8

IUPAC Name: 5-(6-Quinolinylmethylene)-2-[(2-thienylmethyl)amino]-4(5*H*)-thiazolone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{18}H_{13}N_3OS_2.H_2O$

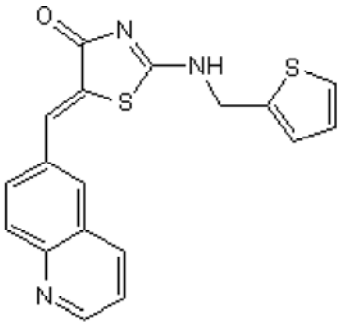
Batch Molecular Weight: 369.47

Physical Appearance: Beige solid

Solubility: DMSO to 20 mM with gentle warming

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.0% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	58.52	4.09	11.37
Found	58.16	3.7	11.46

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

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Product Information

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Description:

Ro 3306 is an ATP-competitive cyclin-dependent kinase 1 (cdk1) inhibitor (K_i values range from 35 to 240 nM depending on cdk1 binding partner). Also reported to inhibit other cdks (K_i values are 0.89-1.32, 0.03 and >2 µM for cdk2, cdk3 and cdk4, respectively). Induces G2/M phase cell cycle arrest and apoptosis. Downregulates the expression of antiapoptotic proteins such as Bcl-2 and survivin and enhances downstream p53 signaling in acute myeloid leukemia (AML). RO 3306 also improves homology-directed repair (HDR) -mediated gene editing in hematopoietic stem and progenitor cells.

Physical and Chemical Properties:

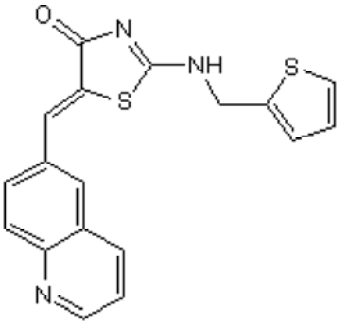
Batch Molecular Formula: $C_{18}H_{13}N_3OS_2.H_2O$

Batch Molecular Weight: 369.47

Physical Appearance: Beige solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 20 mM with gentle warming

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:

Azhagiri *et al* (2021) Homology-directed gene-editing approaches for hematopoietic stem and progenitor cell gene therapy. Stem Cell Res.Ther. ***12*** 500. PMID: 34503562.

Jorda *et al* (2018) How selective are pharmacological inhibitors of cell-cycle-regulating cyclin-dependent kinases? J.Med.Chem. ***61*** 9105. PMID: 30234987.

Yu *et al* (2012) CDK1 regulates mediator of DNA damage checkpoint 1 during mitotic DNA damage. Cancer Res. ***72*** 5448. PMID: 22962268.