

Product Name: Ro 3306

Catalog No.: 4181

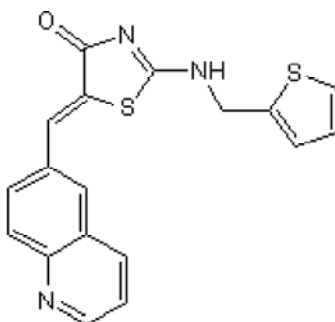
Batch No.: 2

CAS Number: 872573-93-8

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₃N₃OS₂.H₂O
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
¹H 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

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(5H)-thiazolone

Description:

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 μ M 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).

Physical and Chemical Properties:

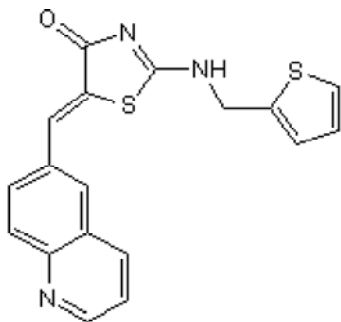
Batch Molecular Formula: $C_{18}H_{13}N_3OS_2 \cdot H_2O$

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:

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.

Kojima et al (2009) The CDK1 inhibitor RO-3306 enhances p53-mediated Bax activation and mitochondrial apoptosis in AML. *Cancer Sci.* **100** 1128. PMID: 19385969.

Vassilev et al (2006) Selective small-molecule inhibitor reveals critical mitotic functions of human CDK1. *Proc.Natl.Acad.Sci.* **103** 10660. PMID: 16818887.

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

bio-techne.com

info@bio-techne.com
techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors
Tel:+1 612 379 2956